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ABSTRACT

The curriculum guide is the result of a research and development project called CASES--Career Awareness for Secondary and Elementary Students. The guide is in two volumes. Volume 1 (CE 000 981) is intended for the K-6 level. Volume 2 is for grades 7-9 and is divided into five main sections. The first section concerns the characteristics, goals, outcomes, objectives, clusters, and models of career education. Section two is devoted to three subject areas at the seventh grade level: art, health/physical education, and music. Section three covers home economics, industrial arts, language arts, and science at the eighth grade level. The ninth grade level, section four, is devoted to general math, algebra, geometry, general business, typing, and social studies. For each of the subject areas at each level, the material is presented in columns entitled topic or unit, objective, career related instructional activities, and resource materials. Each subject section concludes with a list of selected references. Numerous appendixes accompany each of the grade level sections. The concluding section is a directory of publishers and distributors. (AG)

CE 000 982

ED 087891

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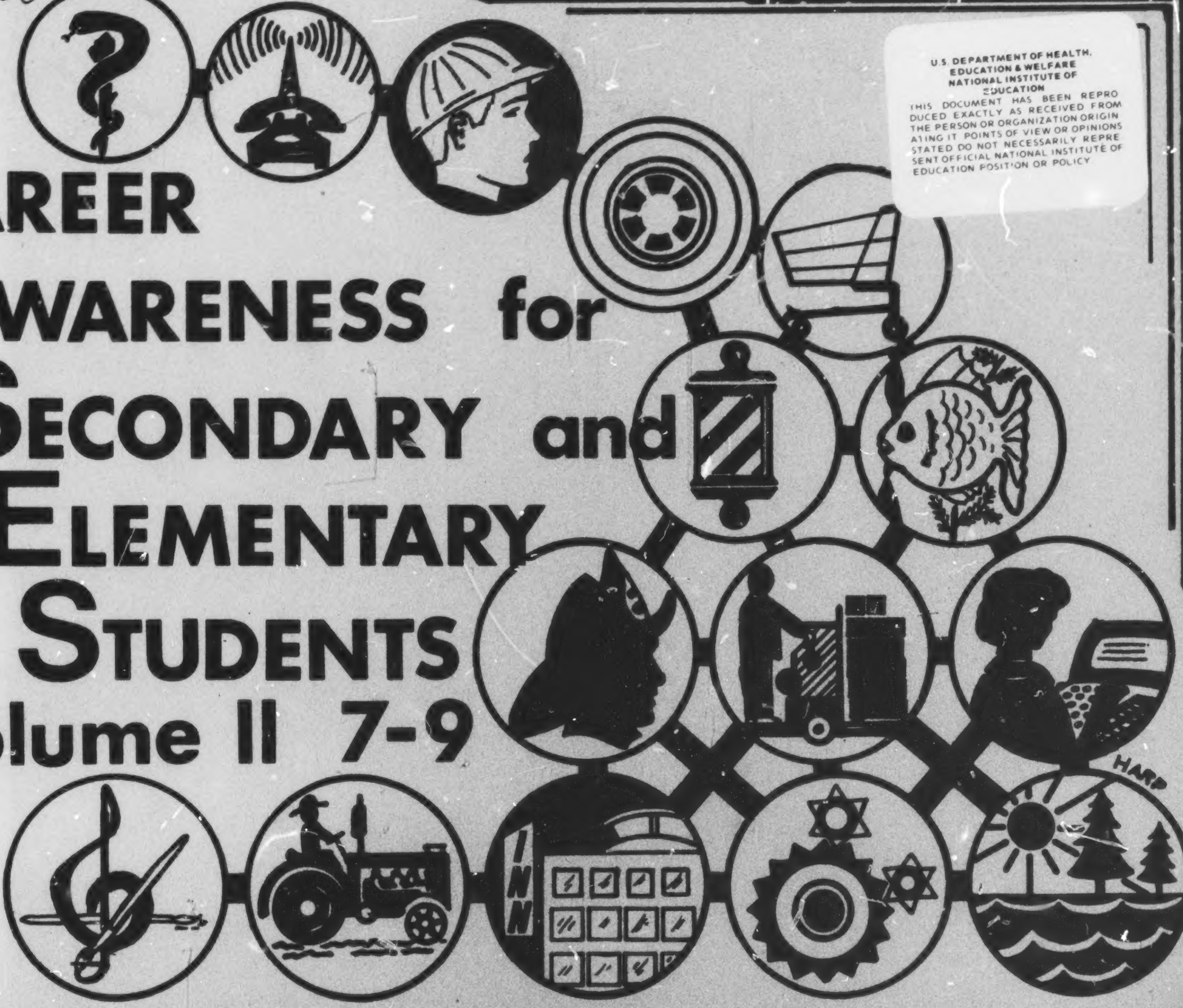

CAREER AWARENESS for SECONDARY and ELEMENTARY STUDENTS

Volume II 7-9

ED 087891

Career Awareness for Secondary and Elementary Students

Resource Curriculum Guide

Volume II 7 - 9

Assembled under the direction of
Dr. Ken Gifford
Assistant Director
Vocational Education

Sioux Falls Indiependent School District #1
Sioux Falls, South Dakota
July, 1973

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PREFACE

The research and development project in Career Education received official approval from the United States Office of Education on February 9, 1972. The grant was awarded to the State Department of Vocational Education, Pierre, South Dakota, and was conducted by the Sioux Falls Independent School District #1, Sioux Falls, South Dakota.

The Sioux Falls Board of Education granted approval to proceed with the project at the regular Board of Education meeting on March 13, 1972. At that time, for the purpose of the Sioux Falls School District, the research and development project was given the title of CASES (Career Awareness for Secondary and Elementary Students).

In october of 1972, the project administration requested a 15 month extension of the CASES program. The purpose of the extension was to develop a curriculum guide, pilot test, and begin to implement the CASES program throughout the junior high schools in Sioux Falls. The approval of the extension was received from the U.S. Office on May 1, 1973, and was given the project number V361053L.

ACKNOWLEDGMENTS

A committee of staff members from Whittier Junior High School was formed in April 1973. The committee represented each of the subject areas being taught at the junior high level in Sioux Falls. The committee met for three one-hour planning sessions during April and May, and then held a five-week workshop in June and July. This guide is the result of their efforts and expertise.

The Sioux Falls Independent School District is indebted to the following individuals who are responsible for the formulation of this resource guide:

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INTRODUCTION TO

CAREER EDUCATION

PURPOSE

The purpose of this project is to outline the scope, goals, and objectives of career education and to assist in the development of a broader understanding of its implications on our educational system.

Administrators of education at all levels are confronted with a major problem: How to develop a comprehensive educational system which will assist all students in developing personal goals in career selection.

Dr. Marland, United States Commissioner of Education, feels that by making career education as the central theme of our educational system it is possible to develop and implement a comprehensive educational program that will reflect a far broader understanding of the purpose of education in today's highly sophisticated, technical change-oriented society. It will prepare all students to function efficiently, make them aware of why they are doing what they are doing and bring relevance to the classroom for many who, with reason, now find it irrelevant.

WHAT IS CAREER EDUCATION

Career education is the development of a lifelong learning process that provides for the broad approach to preparation for citizenship; provides job information and skill development; and also helps individuals develop attitudes about the personal, phychological, social and economic significance of work in our society. It develops and fosters vocational and recreational interests of individuals and helps them prepare for well-rounded living in a world in which leisure time is increasing and greater opportunity for self expression through creative production is available.

PROJECTED OUTCOMES FOR CAREER EDUCATION

Inherent in the career education curriculum would be an organized and systematic procedure that will ensure all students leaving school will have the skill, knowledge, and expertise to exercise three options:

1. Enter the labor force with positive attitudes toward the world of work and command of the functional skills.
2. Be accepted in a post-high school technical training program.
3. Pursue a career in a higher education program which will lead to a four-year baccalaureate degree.

We have a responsibility to provide experiences for those members of our community who desire to maintain, enhance, or establish new "living skills". This can be accomplished only through a highly organized and efficient adult education program.

In addition, provisions must be provided for those youth and adults who have left school so they may be given the opportunity to pursue additional educational or career options through a flexible basic adult and vocational adult educational system that offers unlimited options.

CHARACTERISTICS OF CAREER EDUCATION

A. Career education helps students to develop a personal plan for lifelong learning which will include learning about the world we live in, its people, the social and physical environment; learning about the sciences, arts, and literature we have inherited and are creating; and learning about the way in which the world's people are interacting. Effective career education equips individuals to live their lives as fulfilled human beings.

B. Career education is organized in a pyramid approach, beginning with self and career awareness in the elementary grades and moving from the general to the more specific orientation to the world of work. In junior high school, students are provided with exploratory experiences. These experiences in turn, provide knowledge and experience to assist decision-making regarding areas of study and more specific preparation which the student will pursue in senior high school, postsecondary, and adult education programs. Intensive guidange and counseling is provided concurrently with classroom instruction and skill development to improve the student's decision-making abilities.

C. Careers are structured in relation to fields of work or clusters of occupations which are related to each other, such as the industrial cluster, agricultural cluster, or marketing cluster.

D. Emphasis is placed on using multi-media learning approaches such as films and video-tapes which may be more effective with students having a wide range of learning styles and skills. Types of instructional methods include classroom and laboratory activities, field observation, in-school skill training, work experience, cooperative education, and on-the-job training.

E. All students leaving high school will be prepared for, and actively assisted in securing placement in either a job in the world of work, a post-secondary vocational-technical education center, or a higher education degree program.

F. Career education focuses on the needs of the individual, society, economy, and the employer.

G. Career education provides knowledge and experiences that will enhance employment adaptability in a time of rapid changes due to technological advances and fluctuating economic trends.

H. Successful operation of a career education program will require active participation from advisory counsils, composed of local employers, union representatives, and involved community groups.

SPECIFIC GOALS OF CAREER EDUCATION

1) To make educational subject matter more meaningful and relevant to the individual through a process of curricular restructioning and focusing it around a career development theme.

2) To provide all persons the guidance, counseling, and instruction needed to develop their self-awareness and self-direction; to expand their occupational awareness and aspirations; and to develop appropriate attitudes about the personal and social significance of work.

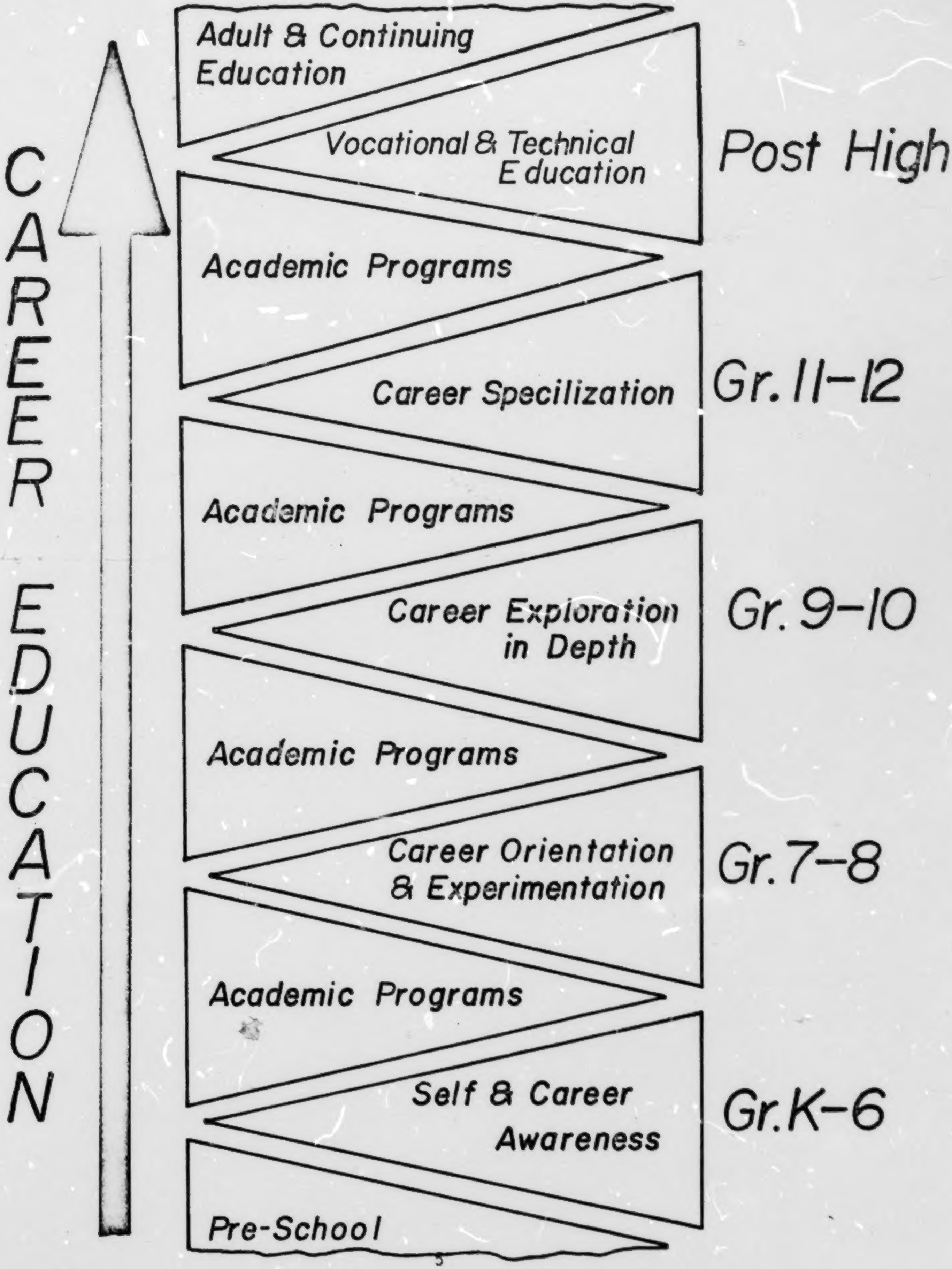
3) To assure the opportunity for all persons to gain an entry level marketable skill prior to their leaving school.

4) To prepare all persons completing secondary school with the knowledges and skills necessary to become employed or to pursue further education.

5) To provide services for placing every person in the next step in his development whether it be employment or further education.

6) To build into the educational system a greater utilization and coordination of all community resources.

7) To increase the educational and occupational options available to all persons through a flexible educational system which facilitates entrance and re-entry either into the world of work or the educational system.


CAREER EDUCATION
Adult & Continuing Education
Vocational & Technical Education
Post High
Academic Programs
Career Specilization
Gr. 11-12
Academic Programs
Career Exploration in Depth
Gr. 9-10
Academic Programs
Career Orientation & Experimentation
Gr. 7-8
Academic Programs
Self & Career Awareness
Gr. K-6
Pre-School

PHASES OF DEVELOPMENT

I. Self and Career Awareness

A program to familiarize students with the world of work including the many kinds of work people do and the inter-relationship of such work in producing and using goods and services. Emphasis is placed upon attitudes, values, dignity of work, and the relationship of manipulative activities to the total instructional programs.

II. Career Orientation and Exploration

A program consisting of laboratory instruction (1) to give students first-hand experiences with the kinds and levels of work performed in a broad range of industry and occupations for which special skills are required; (2) to inform them of requirements and qualifications for particular careers; (3) to acquaint them with the significance of changing and evolving technologies; (4) to instill in them an understanding and appreciation for the dignity of work; and (5) to assist them in making informed and meaningful career selections.

III. Career Exploration in Depth

A program designed to provide transitional experiences to bridge the gap between the awareness/orientation focus and specialized in-depth offerings. Experiences will provide students with the opportunity to select and explore an occupational cluster for the purpose of assessing his performance, aptitudes, and interests.

IV. Career Specialization

A program which is designed to prepare individuals for enrollment in advanced or highly skilled post-secondary and technical education programs. Experiences should assist the students in continuing to assess their interests, abilities, limitations, and potentialities with respect to industrial and technical occupations. It should provide them with entry level skills and knowledge from a selected occupation as well as selected occupational cluster or portion of that cluster.

V. Vocational-Technical Education

A program of education organized to prepare the learner for entrance into a particular chosen vocation or to upgrade employed workers; including such divisions as trades and industrial education, technical education, agricultural education, distributive education, and home economics education.

VI. Adult and Continuing Education

A program of laboratory experiences for adults and out-of-school youth who may benefit from broad, basic instruction related to the educational needs of the community.

OBJECTIVES FOR

GRADE LEVELS K - 6

The student will:

A. Develop a sense of personal worth

B. Develop a more realistice perception of self.

Who am I?

How do I relate to people?

How can I improve myself?

C. Develop and improve interpersonal relationships.

D. Develop wholesome attitudes toward all types of work.

E. Will become familiar with occupations through exploration of the world of work.

OBJECTIVES FOR

GRADE LEVELS 7 - 9

A. Develop and implement a career centered educational program as an integral component of the curriculum.

B. Acquaint students with various types of individual differences and promote appreciation of how individual differences affect career decisions while investigating their individual characteristics.

C. Enable students to use the various sources of occupational resources and classifications and survey those occupations with which they can identify and which are of most interest to them.

D. Compare the expectations of junior high school with high school and relate courses of study and school activities to career decisions.

E. Encourage in-depth exploration in one or more occupational clusters which may provide entry level skill and evaluate the results based upon the individual career aspirations of the student.

F. Provide guidance and counseling services to further assist students in determining their course of study for the high school with the following options: (1) intensive job preparation (2) preparation for post-secondary occupational programs, or (3) preparation for a 4-year college or university program.

OBJECTIVES FOR

GRADE LEVELS 10 - 12

A. The student will select educational and training programs in terms of his needs, interests, abilities, and values that will assist him in converting career preference into reality.

B. The student will formulate a personal definition of work.

C. The student will analyze his vocational choice and the possible careers which he might pursue in terms of his interest, abilities, and chances for success.

D. The student will analyze the degree to which hobbies and interests affect his present career choice.

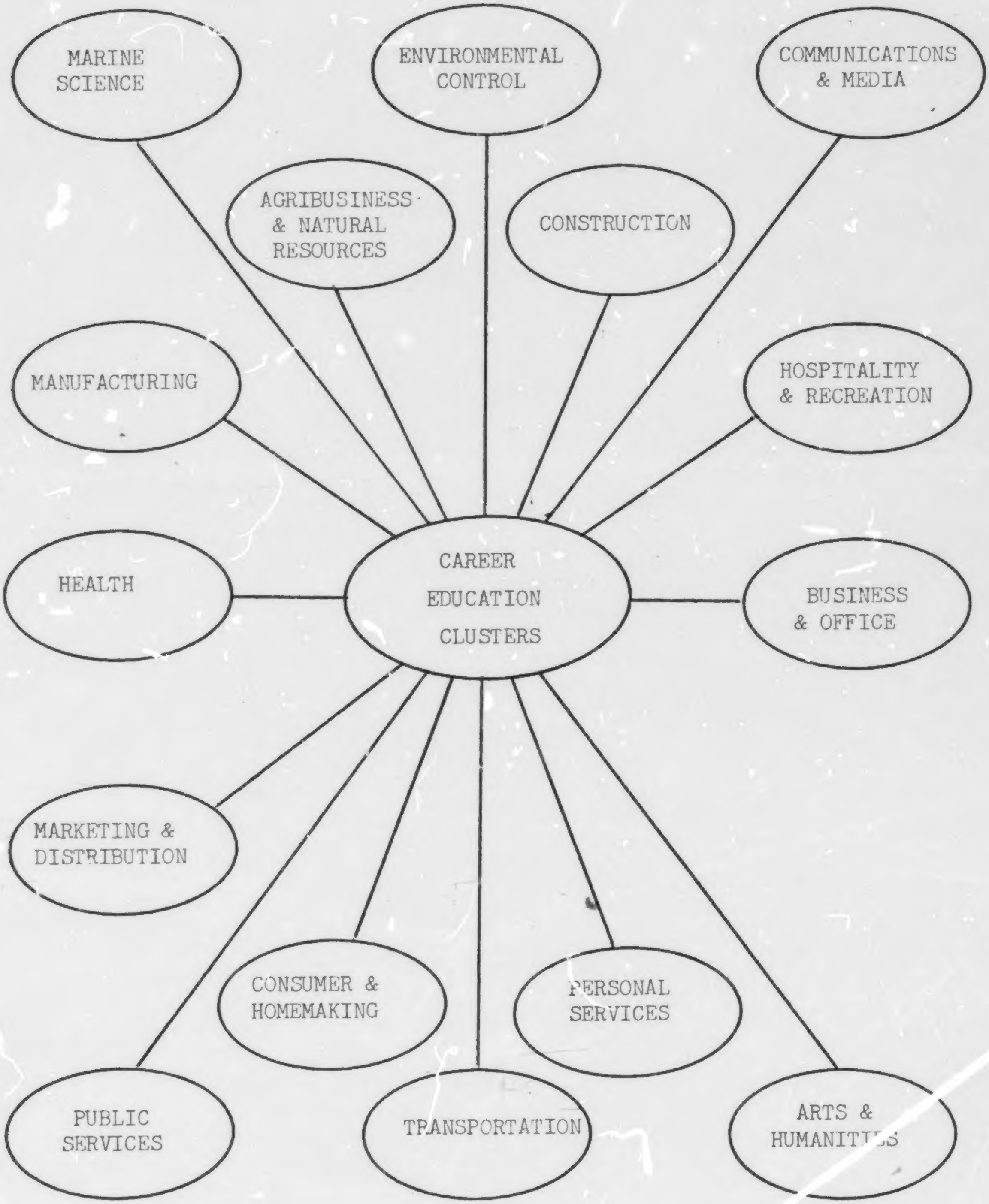
E. The student will demonstrate basic educational and vocational skills which will qualify him for an entry level job or for further education in an occupational area of his choice.

CLUSTERS

The body of content has been divided into fifteen clusters that encompass the world of work, as described by the United States Office of Education. Each cluster included occupations and their function as they relate to the general economic or societal pursuits and which require similar skills and knowledges.

The clusters include:

- Health
- Construction
- Manufacturing
- Transportation
- Marine Science
- Public Services
- Personal Services
- Arts and Humanities
- Business and Office
- Environmental Control
- Consumer and Homemaking
- Communications and Media
- Hospitality and Recreation
- Marketing and Distribution
- Agri-Business and Natural Resources


MARINE SCIENCE
ENVIRONMENTAL CONTROL
COMMUNICATIONS & MEDIA
AGRIBUSINESS & NATURAL RESOURCES
CONSTRUCTION
MANUFACTURING
HOSPITALITY & RECREATION
HEALTH
CAREER EDUCATION CLUSTERS
BUSINESS & OFFICE
MARKETING & DISTRIBUTION
CONSUMER & HOMEMAKING
PERSONAL SERVICES
PUBLIC SERVICES
TRANSPORTATION
ARTS & HUMANITIES

CAREER EDUCATION MODELS

The United State Office of Education has given its new Career Education Development Task Force fifteen million dollars for fiscal 1972, plus some funds left over from OE's 1971 budget, for the development of four basic models to undergrid Commissioner Sidn[illegible]. Marland's career education concept. The four (called the school-based model, the employer-based model, the home-based model, and the institutional model) will be designed to permit people to shift from one mode to another as their needs change. In short, they take into consideration the fact that people are not students all their lives.

School-Based Model

This affects the entire grade and high school curriculum. At the elementary school level, the child is exposed and learns about a wide range of jobs and their requirements. In junior high, he studies specific occupational clusters, such as Health, Marketing and Distribution, or Public Services. The materials in these clusters are presented through work experiences and observations as well as regular class work. By senior high, the youth is well along toward specialization and acquisition of salable job skills.

Employer-Based Model

A consortium of public and private employers, such as unions, community groups, and public agencies, would join to provide unmotivated students, aged 13 through 18, with what OE calls "significant alternatives" to current schools. These alternatives would combine vocational training, education in academic fundamentals and work experience selected for career development possibilities. Enrollment would be open year-round and youngsters would progress at their own pace.

Home-Based Model

The idea here is to provide learning for young adults (18 through 25) and possible older persons too, who have left formal schooling. They would, presumably, increase their employability using the home as a learning center through modern technology--TV and radio, audio-visual tape cassettes, and printed materials.

Institutional Model

This is sometimes called the rural-residential model. The model's purpose is to develop and implement resident career education programs for unskilled persons living in rural areas. Families would be brought to the training site so that, in the words of an OE source, "Each family member can develop an appropriate career role through employment, study, or home management or a combination of these."

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

ART

Grade 7

Prepared by

Edward Harp

INTRODUCTION

Because art is important to a large variety of careers, seventh grade should give students an awareness of the opportunities and careers available. We will allow approximately one week out of our regular Art curriculum for this purpose.

Art skills and techniques should be explored as the student copes with his physical and social environment. As in most areas today, the key to a career in art is specialization, and only after preparation of the basic requirements can a student choose the branch or field of art he would like to enter. Among the countless possibilities open to young men and women today are sign painting, showcard and reproduction lettering, typogoraphy, industrial and interior design, art education, fashion design, illustration, cartooning of all types, packaging, and lettering. The following activities are intended as examples that could be used, and you may use or delete the material mentioned.

OBJECTIVES

1. Students will be introduced to the wide range of careers available in Art.
2. Students will consider basic educational requirements of several career areas.
3. Students will determine the basic skills needed in the performance of certain art careers.
4. Students will become aware of their abilities and interests.
5. Students will illustrate kinds of work that involves working with people, working with ideas, and working with things.
6. Students can cite the advantages and disadvantages of a variety of careers in terms of his interests and abilities.
7. Able to clarify purpose.
8. Develop understanding of art elements and design principles.
9. Develop an understanding of procedures and methods.
10. Students will consider their skills and processes related to various hobbies and interests which might influence their career choice.
11. Develop skill in use of media techniques and art processes.
12. Students will participate in a realistic work situation as part of the school program.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Orientation to careers in art	Students will be introduced to the wide range of careers available in art.	Students will look at the chart listing occupations related to interests and abilities in art and then make their own list adding new ones.	Use cluster chart. Professional Careers Kit "Art Careers" Largo, Florida (Whittier)
	Students will consider basic educational requirements of several career areas.	Students will list elements of basic education that they feel might be necessary to function in the field of art.	Career and Opportunities in Commercial Art. by J.I. Biegeleisen (Area School)
	Students will determine the basic skills needed in the performance of certain art careers.	The student will discuss the skills that are pertinent to art related jobs. Students will compare skills required for a variety of workers; e.g. floral designer, window displayman, a sign painter, and etc.	Career (Largo) Exploratory Kit Use with job description. (Whittier)
Sales in art	Students will become aware of their abilities and interests	People seem to have the impression that the majority of paintings and art works are sold from the artist to the individual. The fact is however, that almost all art creations are sold through a retail outlet.	
		Students may talk to various representatives in the sales field. Local speakers may include Art dealers, commercial artists, representatives from any supply houses that may be available.	Art dealers as speakers. Supply house representatives.

Subject ART

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		Speakers should talk about opportunities in art sales fields and what sort of background is necessary. After the speakers have made their presentations to the class, the students might like to discuss and list the uncommon art supplies. The list could include unframed fine art reproductions, air brushes, welding equipment, materials for making hooked rugs, borin, sable brushes, 140-pound watercolor paper, asphaultum, etchall glass etching, powdered ceramic glaze, felt pads for printing press, acrylic paint by the gallon, canvas by the yard, and picture frames.	
Team cooperation	Students will illustrate kinds of work that involves working with people, working with ideas, and working with things.	A drawing illustrating the store interior along with a floor plan diagram would be useful. Students could work in groups of two or three. After discussion an viewing occupational clusters students may construct visual displays, posters, collages, and etc., which reflect tentative occupational choices.	Film "Careers in Art" SL Film Productions 5126 Hartwick Street Los Angeles, California 90041 Rental $10.00
	Students can cite the advantages and disadvantages of a variety of careers in terms of his interests and abilities.	Students might draw cartoons to illustrate advantages or disadvantages to certain career interests.	King Features (Fine Arts and Humanities careers) (Whittier)

Subject ART

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Advertising Art	Able to clarify purpose Develop understanding of art elements and design principles	Advertising is the largest commercial field that makes use of artistic skills. Under this category we find a whole cluster of family careers. Some artists specialize in illustration art in all fields, e.g. magazine, medical, science, and etc. Many work for newspapers, or ad agencies, and some work for retail establishments, and still others free lance. Speakers would be helpful in introducing the art careers within advertising. Students could apply what they have learned into an individual advertisement which they themselves create. You might use the Argus Leader ad contest for this lesson. Students could also use a poster advertisement.	
	Develop an understanding of procedures and methods.	Students could also use school functions as a source for making posters for advertising. The finished products are then displayed and criticized by the class, as to clarity, visual impact, layout and lettering, and originality.	
Individualization	Students will consider their skills and processes related to various hobbies and interests which might influence their career choice.	Students might make an illustration or poster depicting what their career choice or how a hobby may enhance that career. The third filmstrip under resources is on musicians	Guidance Associates Filmstrip People Who Create Art 1. People Who Create Art 2. Puppeteer 3. Designer (Whittier)

Subject ART

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Develop skill in use of media techniques	Students will choose their own media they would like to work with in making their projects.	Filmstrip People Who Influence Others 2. Creative Director (Whittier)
Exhibiting	Students will participate in a realistic work situation as part of the school program.	Students will assist in preparing school or private art exhibits. The students will show his finished work to the class by exhibition.	

Subject ART

Grade Level 7th

SELECTED REFERENCES

Printed Material

1. *Career and Opportunities in Commercial Art*, E.P. Dutton and Company, Inc., New York.
2. *Career Development*, Public Schools of Anne Arundel County, Annapolis, Maryland, August 1971.
3. *Career Development*, Robbinsdale School District 281, August 1972.
4. *Career Information Service*, New York Life Insurance Company, New York, 1969.
5. *Exploratory Kit*, Career, Careers Inc., Largo, Florida, 1972.
6. *Popeye and Fine Arts and Humanities Career*, King Features, New York, 1972.
7. *Professional Careers Kit*, Art Careers, Careers Inc., Largo, Florida, 1972.

FILM

1. "Careers in Art", SL Film Productions, Los Angeles, California.

FILMSTRIPS

1. "People Who Create Art", Guidance Associates.
2. "People Who Influence Others", Guidance Associates.

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

HEALTH and PHYSICAL EDUCATION

Grade 7

Prepared by

Jill Steele

INTRODUCTION

In the past five years there has been a virtual explosion in the health services field. This has come about because of the advances in medicine and science and because of a vastly increased demand. One result has been a great increase in the need for health manpower within the already existing health occupations. Another has been the emergence of many new health occupations to conform with the new and highly specialized health services.

One of the ways we can achieve relevance in general education is to infuse all subject matter with illustrations from the world of work. We need to provide opportunities for students to explore the working conditions, political and social environment, and responsibilities for health careers that are open to them. We must give students the opportunities to acquire the knowledge, skills, and attitudes that will assure successful entry into health.

By providing the opportunity for students to explore the health careers, teachers will by helping them to make wiser career choices and to plan educational programs that relate to their career goals.

This guide is intended to be implemented into the health unit on the seventh grade level for a period of five days. This five-day period may be taken at any time during the year; however, it may be suggested as an introduction to entire health curriculum. This guide provides many suggested activities to be used at the instructor's discretion.

OBJECTIVES

To explore his/her abilities and interests.

To make a self-assessment in relation to the world of work.

To familiarize themselves with the various health occupations and present examples of common work settings.

To differentiate between careers and jobs.

To investigate various places of employment available in health careers.

To explore the economic incentives offered by various occupational areas.

To analyze how societal needs create a demand for workers in various occupational areas.

To investigate the availibility of various occupational areas.

To become aware of the course that should be pursued preparatory to entering a health career.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Self-Awareness	To explore their abilities and interests	Self-evaluation sheet. -abilities (academic, creative, social, physical) -interests	Appendix A
		Ask your counselor to visit the class and discuss abilities and explain how aptitude tests measure these abilities.	
		Obtain a professional personality/abilities test from your school counselor. After taking the test, study the questions to see what traits are being tested. Ask your counselor to interpret the test and to discuss personality development and "normal" responses.	
		Discuss the statement: "Personality is a matter o luck; you either have it or you don't." Discuss what heredity and environment have to do with personality.	
	To make a self-assessment in relation to the world of work.	With a list of abilities and interests have the class list various health careers with these various abilities and interests under each.	Investigating Your Health Houghton-Mifflin Co. Boston, Mass. (Appendix B)
		Determine health career possibilities according to own personal abilities and interests. Have the students write a small paper on their abilities and interests and the career possibilities that would interest them.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Overview of Health Careers	To familiarize themselves with the various health occupations and present examples of common work settings.	During the course of the unit, joint activities such as an information table should be directed to making health vocational information and orientation available to youth so they can make an informed occupational choice. Relate personal health histories and problems to people that were directly involved. Discuss these people according to their functions. Discussion on students need to improve health factors. Evaluate present health services and, where necessary, additional services and facilities developed to provide comprehensive mental, physical, environmental and community health services for every individual. (Each team will be given a specific health setting to evaluate.) Students should identify a local problem, give a preventative program, and justify this problem; e.g. Sioux River clean-up. Students may want to follow up on this program, and report to the class about the findings. As a team draw up a functioning unit for evaluating health needs and determining the means of meeting them.	School health cards.

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Overview of Health Careers (cont.)		Make a survey of your class to see how many parents and relatives of classmates are now working in health careers.	
		Gather newspaper clippings catergorized under headings such as medical discoveries, new hospitals and nursing homes, accidents requiring medical treatment, and injured pets or other animals in need of veterinary care. (Teacher may direct students toward health career activities while gathering new items.)	
		Select a girl who has served as a candy striper in a hospital to discuss with the class the types of duties she performed, the opportunity she had to get first-hand knowledge about nursing and related health careers, satisfaction in helping others.	
	To differentiate between careers and jobs.	List occupational areas on overhead--explaining each area as it may pertain to Sioux Falls.	Health Occupations-An Exploratory Module Oregon Board of Education Salem, Oregon (Appendix C)
		Read comic books on health careers.	Popeye and Health Careers King Features Comic Book

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Overview of Health Careers (cont.)		Have students bring pictures of various people involved in health careers and make a collage.	
		Divide the class into 18 different teams according to the occupational groups. Using the library break these areas into specific jobs.	Occupational Outlook Handbook Health Careers Kit Largo, Florida
		Each student in the team study one job briefly as to duties, working conditions, personal qualifications, education requirements, certification, educational opportunities, outlook, earnings, hours, advancement, where employed. Within own group discuss the similarities and differences, advantages and disadvantages, etc.	
		Make a chart of each area and specific jobs.	
		Students will study various echelon positions in a medical lab, hospital, etc.--make a comparative analysis chart using training program, initial education requirements, promotional opportunities, fringe benefits etc.	McKennan, Sioux Valley, V.A. Hospitals labs.
		Discuss the increasing trend toward specialization in the medical profession, and the problems and benefits that result.	

Grade Level 7th

Subject Health

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Overview of Health Careers (cOnt.)	To investigate various places of employment available in health careers.	Within each team compile a list of the various places of employment in Sioux Falls of your particular group. As an entire class compile a list with addresses and post. Have students visit or contact these places report, skit, class presentation, etc. Assign teams to investigate health career opportunities in large organizations such as the Food and Drug Administration or the World Health Organization.. Have students find out what kinds of volunteer services they can perform for local hospitals and community projects. Present each team a role playing situation in which they must visualize themselves as responsible for several days or a week, for assigning all health workers to various situations in the community; e.g. A school provides their students physicals prior to the beginning of school. Free TB tests are being given in the community.	Hospitals, nursing homes, clinics, medical or dental offices, public health and welfare agencies, industrial health centers, schools, camps, family homes. (Apperdix D)
	To analyze the skills to various hobbies and interests which may influence career choice.	List health related hobbies and group them. The students will seperate themselves into teams, assigning each team to find out through library research and personal experience what influence upon and relationship to definite careers each hobby would have. Give the students a time alotment and make a contest to see which group has the largest number of hobby career combinations.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Overview of Health Careers (cont.)		List classes and extracurricular activities that help students decide upon careers. Chart those people involved in each activity.	
	To explore the economic incentives offered by various occupational areas.	Graph the various jobs in health according to salary. Chart the various salary levels according to educational level, skill level, place of employment (geographical or seasonal), etc.	Health Careers Guidebook U.S. Printing Office Washington, D.C. (Appendix F)
		Hand out career puzzle and make a contest to see which student finishes the puzzle first.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Opportunities	To analyze how societal needs create a demand for workers in various occupational areas.	Make charts or bulletin boards to show where the greatest need for health programs are being created. Recently computers have been introduced into the field of medicine they have been used as sids in making medical diagnosis. Have students discuss the significance and possible effects of computer applications in view of increasing population and shortage of health personnel. Check census as to the number of people in each occupation--chart these figures according to male-female ratio, increase or decrease in each job for the past ten years, and expected number in the next teh. years. Discuss these figures as an entire class. Discuss students own attitudes on health jobs. Research how administrative responsibility for programs in health occupations education has shifted from health service institutions to public education institutions. Show to class through charts and graphs.	
	To differentiate between broad occupational areas in terms of the contribution and importance of these areas to our society.	Survey various people in the community as to the impact of various health jobs on society. As an entire class compile these comments and divide according to age groups. Compare and contrast these comments.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Opportunities (cont.)		As a team make a commercial and/or poster selling the various health occupations to society.	
	To investigate the availability of various occupational areas.	Show filmstrip.	Filmstrips: "Compassion for People"--RN, LPN, Mental Health Aide, Orthotist, Inhalation Therapy Technician. Bowmar Multi-Media Guidance Material. (Vocational School)
		Compare and contrast availability of jobs according to occupational openings, training, geographical availability.	
		Write a small paper within each team: "How to stimulate interest in health careers for which there is great demand?"	
		Talk with people involved in various occupations as to availability--report to class through charts.	
	To become acquainted with the fact that an interesting career is open to students of either sex and with practically any interest or background.	Discuss women in the field of work.	
		Guest speaker--personnel manager on hiring a woman and problems involved.	Hospitals
		Guest speaker--male LPN -ask him to speak on the difficulty in attracting men into careers usually designated as female.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Opportunities (cont.)		Make a poster attracting men into a health career usually designated as a female job.	
		In the U.S. women constitute 9% of medical students compared with 24% in Great Britain and 70-75% in the Soviet Union. What reason might account for these facts?	
		Invite a counselor from a post-secondary school and/or representative from a health association to discuss location of training centers and existing health occupations program. Consider projection for the next ten years.	Health Department or High School Counselor
		Selected students interview personnel directors in representative health facilities regarding job advancement policies. All students would be asked to assist in preparing questions for the interview.	Sioux Falls Health Facilities

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Requirements	To become aware of the course that should be pursued preparatory to entering a health career.	Discuss decisions accompanying entering a health career.	
		Divide up students according to areas--work out prerequisite recommended or required for admission to health occupations educational programs or entry-level employment after high school.	
		Have a class discussion on "Suggestions for making your high school years pay off in the future."	
		Discuss years of education and training beyond high school for careers selected in health occupations.	Investigating Your Health Houghton-Mifflin Co. Boston, Mass. (Appendix H)
		In teams work out curriculums or educational requirements for one or more selected health occupations.	Counselors office--College catalogs
		Visit college classrooms or labs to observe programs in action.	Augustana or Sioux Falls College
		Discussion: If I don't choose to go to college or go directly to work, what other choices are open?	
		Students interview students enrolled in health occupations.	

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Requirements (cont.)		Public health personnel may be contacted by student letters regarding needed academic credentials and available on-the-job training for health occupations in the public employment sector.	Department of Health Hospitals or clinics
		Determine procedure for licensing practitioners under state law to assure minimum cometency. Talk to a doctor on testing for becoming licensed.	
		Development by the students of a health career bulletin board as simple or eleborate as time and materials allow.	
	To discuss different kinds of preparation and performance necessary for various levels within an occupational area.	Select health career areas to study, identify a series of jobs, investigate amount of training involved in a preparatory process, and demonstrate skills.	
	To explore the possibility of financial aid in the area of health.	Write to various health agencies asking about financial aid for further education in the field of health. (Findings should be made available to parents.)	Government -National -State -Local
		Speaker on financial aid -students have questions ready	Area Colleges

Subject Health

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Occupational Requirements (cont.)		As a team calculate how much money would be needed to attend 1) a small state school 2) a large state university 3) a prestige private school to qualify for one of the following jobs: a) lab technician b) dental assistant c) registered nurse d) school (public health) nurse e) dentist f) pharmacist g) psychiatrist h) speech therapist. Include tuition, lab fees, clothes, transportation, board and room. Compare your findings with the other teams.	

Subject Health

Grade Level 7th

ACKNOWLEDGMENTS

The writers of this section of the resource guide wish to acknowledge the following school districts for their ideas and resource materials on various activities which aided in the implementation of the C.A.S.E.S program into the Language Arts curriculum.

Atlanta Public Schools
Atlanta, Georgia
ESEA Title III, 1970

Career Development K-12
Level III & IV
Public Schools of Anne Arundel County
Annapolis, Maryland

Oregon Board of Education
Salem, Oregon
An exploratory module and exploratory course

State Department of Public Instruction
Division of Vocational Education
Trade & Industrial Education
Raleigh, North Carolina
TIE Series No. 58

SELECTED REFERENCES

PRINTED MATERIALS

Guidelines for Health Occupations Education Programs, U.S. Government Printing Office, 1972.

Health Careers Guidebook, U.S. Government Printing Office.

Health Careers Kit, Careers Inc., 1972.

Health & Growth: 7, Scott, Foresman & Co., 1972.

Health For Better Living, Charles E. Merrill Publishing Co., 1972.

"Health Occupation--An Exploratory Course", Oregon Board of Education.

"Health Occupation--An Exploratory Module", Oregon Board of Education.

Health Today and Tomorrow, Doublday and Co. Inc., 1966.

Investigating Your Health, Houghton-Mifflin Co.

Living in Safety and Health, J.B. Lippincott., 1966.

Making Health Decisions, Prentice-Hall Inc., 1970.

Occupational Outlook Handbook, U.S. Government Printing Office.

Popeye and Health Careers, King Features, 1972.

FILMS

"Horizons Unlimited", State Department of Health-Health Education Section.

FILMSTRIPS

"Compassion for People--Inhalation Therapy, LPN, Mental Health Aide, Orthotist, RN.", Bowmar, 1972.

SELF-EVALUATION

Circle the best answer that applies to you.

1. On a rainy day I would:
    A. Read a book
    B. Play the piano
    C. Play with a friend
    D. Think of an indoor game

2. My friends like to:
    A. Go to the library
    B. Go to the movies
    C. Go on a picnic
    D. Go to football and basketball games

3. As a family we would like to:
    A. Hear a speaker on drugs
    B. Go to a band concert
    C. Go to the movies
    D. Watch a tennis tournament

4. I talk to my friends about:
    A. School
    B. Things I have made
    C. People and what they are doing
    D. Sports

5. The most important thing to me:
    A. Doing well in school
    B. Making something with my hands
    C. Having many friends
    D. Being the best in sports

6. I do the best:
    A. In my school work
    B. At making things
    C. At talking to people
    D. In playing games

7. If I were to draw a picture it would be of:
    A. Buildings or houses
    B. A landscape scene
    C. People doing things
    D. People playing a game

8. I would do the best if I were a:
   - A. Teacher
   - B. Artist
   - C. Salesclerk
   - D. Recreational director

9. I am the best at working:
   - A. With ideas
   - B. In arts
   - C. With people
   - D. In athletics

10. My best quality inherited from my parents is my:
    - A. Intelligence
    - B. Creativity
    - C. Ability to talk to people
    - D. Athletic ability

11. I get my best grades in:
    - A. Art ______
    - B. English ______
    - C. Health ______
    - D. Math ______
    - E. Music ______
    - F. Phy. Ed. ______
    - G. Science ______
    - H. Home Ec. ______
    - I. Industrial Art ______
    - J. Social Studies ______

12. My favorite class is:
    - A. Art ______
    - B. English ______
    - C. Health ______
    - D. Math ______
    - E. Music ______
    - F. Phy. Ed. ______
    - G. Science ______
    - H. Home Ec. ______
    - I. Industrial Art ______
    - J. Social Studies ______

RELATED HEALTH CAREERS

A. ACADEMIC ABILITIES AND INTERESTS:

- Researchist
- Technician
- Doctor
- Nurse
- Surgeon
- Computer programmer
- Pharmacist

B. CREATIVE ABILITIES AND INTERESTS:

- Medical artist
- Occupational therapist
- Music therapist
- Research photographer

C. SOCIAL ABILITIES AND INTERESTS:

- Administrator
- Doctor
- Nurse
- Public relations
- Health economist
- Health sociologist
- Social worker

D. PHYSICAL ABILITIES AND INTERESTS:

- Corrective therapist
- Physical therapist
- Recreational therapist
- School health educator

APPENDIX B

SCHOOL INTERESTS-RELATED HEALTH CAREERS

SCHOOL INTEREST	RELATED HEALTH CAREERS
Art	Medical artist and illustrator Poster and display artist Occupational therapist
Business and Finance	Administrator and administrative assistant Comtroller, accountant
Clerical Skills	Business office worker Medical records librarian Medical secretary Ward clerk
Electronics	Computer programmer Computer operator Electronics technician Medical engineer
English and Journalism	Health educator Librarian (hospital and medical) Public information specialist Public relations officer Science writer Technical writer
Home Economics	Dietitian Executive housekeeper Food service worker Homemaking rehabilitation consultant Nutritionist
Industrial Arts	Hospital engineer Instrument maker Maintenance worker Manual arts therapist Medical engineering technician Prosthetic appliance maker
Languages	Medical librarian translator of medical and scientific publications

SCHOOL INTEREST	RELATED HEALTH CAREERS
Mathematics	Biomedical research scientist Computer programmer Health statistician Statistical clerk
Modelmaking	Exhibits builder Science model technician
Music	Music therapist
Photography	Photographer - research or public information
Physical Education	Corrective therapist Physical therapist Recreation therapist School health educator
Science	Biologist, Chemist, Physicist, Mathematician and Engineer in basic research and environmental health, including sanitary engineer sanitarian, industrial hygienist, radiological health specialist. Food and drug protection Medical engineering
Social Studies	Health economist Health sociologist Psychologist Public health educator Public health program assistant Social worker

APPENDIX C

HEALTH OCCUPATIONS

ADMINISTRATION

- Hospital administrator
- Medical clinic administrator
- Nursing home administrator
- Unit manager

BASIC SCIENCE AND RESEARCH

- Anatomist
- Biochemist
- Biologist
  - general
  - cell
  - micro
- Biomathematician
- Biometrist
- Biophysicist
- Cryogenicist
- Endocrinologist
- Entomologist
- Epidemiologist
- Geneticist
- Health physicist
- Hemotologist
- Hydrostratistician
- Parasitologist
- Pharmacologist
- Physiologist
- Psychometrist
- Serologist

DENTISTRY

- Dentist
  - Endodonist
  - Oral pathologist
  - Oral surgeon
  - Orthodontist
  - Pedodontist
  - Peridontist
  - Prosthodontist
  - Public health dentist
  - Dental hygienist
  - Dental assistant
  - Dental aide

DIETETICS AND NUTRITION

- Nutritionist, Ph.D.
- Nutritionist dietician
- Dietician
- Dietician interne
- Dietician aide
- Food service supervisor
- Food service technician/assistant

EDUCATION

- Health education teacher
- Physical education teacher
- Public health educator
- Public health assistant/aide
- Community health assistant
- Health occupations educator

ENVIRONMENTAL HEALTH

- Air sanitation specialist
- Environmental health technician
- Industrial hygiene engineer
- Sanitarian
- Sanitary engineer

HEALING ARTS

- Physician & surgeon
  - Anesthesiologist
  - Dermatologist
  - Geriatrician
  - Internist
  - Neurologist
  - Obstetrician/Gynecologist
  - Occupational medicine
  - Ophthalmologist
  - Otolarnygologist
  - Pathologist
    - general
    - clinical
    - medical
  - Pediatrician
  - Physical medicine & rehabilitation
  - Proctologist

HEALING ARTS cont.

  - Psychiatrist
  - Public health
  - Radiologist
  - Surgeon
    - general
    - cardiopulmonary
    - neuro
    - orthopedic
    - plastic
- Urologist
- Physician assistant
- Chiropractor
- Naturopath
- Osteopath
- Podiatrist
- Podiatrist assistant
- Veterinarian
- Veterinarian assistant

INFORMATION SERVICE

- Medical illustrator
- Medical librarian
- Medical records librarian
- Medical records technician
- Hospital information specialist

MEDICAL TECHNOLOGY

- Bloodbank technician
- Certified laboratory technician
- Certified laboratory assistant
- Chemistry technician
- Cytological screening technician
- Cytotechnologist
- Electrocardiograph technician
- Electroencephalograph technician
- Histologic technician
- Laboratory technician (uncertified)
- Medical technologist
- Nuclear medical technologist
  - Isotope technologist

NURSING

- Registered nurse
  - Associate degree nurse

NURSING cont.

  - Diploma nurse
  - Bachelor of science
  - Master of science
- Licensed practical nurse
- Home health aide
- Housekeeping aide
- Medical emergency technician
- Nurse aide
- Nursing assistant
- Obstetrics technician
- Orderly
- Psychiatric aide
- Surgical technician
- Ward secretary
- Central supply technician

ORTHOPEDIC/PROSTHETIC APPLICANCE MANUFACTURING

- Orthoptist
- Orthotist
- Prosthetist

PHARMACY

- Pharmacist
- Pharmacy assistant

RADIOLOGY, ENGINEERING, ELECTRONICS

- Biomedical engineer
- Biomedical engineer technician
- Biomedical electronics technician
- Medical nuclear technologist
- Medical radiological technician
- Radiation engineer
- Radiobiologist
- Radio therapy technician
- Radio chemist
- Radiologic physicist
- Radiologic technologist
- Radiolocial health specialist
- Safety engineer

SECRETARIAL AND OFFICE

Medical office assistant
Medical-dental receptionist
Medical secretary
Medical transcriptionist
Admitting clerk

SPEECH PATHOLOGY/AUDIOLOGY

Audiologist
Audiology assistant
Speech pathologist
Speech therapist
Speech therapy assistant

SOCIAL WORK/COUNSELING

Mental health technician
Psychologist
Psychometrist
Social welfare case aide
Social worker
Social work assistant

THERAPY

Corrective therapist
Educational therapist
Inhalation therapist
Manual arts therapist
Music therapist
Occupational therapist
Occupational therapist assistant
Physical therapist
Physical therapist assistant
Recreational therapist
Recreation assistant

VISUAL/EYE CARE

Dispensing optician
Ophthalmic technician
Opthalmologist
Optical technician
Optician
Optometric assistant
Optometrist

APPENDIX D

HEALTH RESOURSES IN SIOUX FALLS

HOSPITALS

Crippled Children's Hospital and School
McKennan Hospital
Sioux Valley Hospital
Veteran' Administration Hospital

NURSING HOMES

Bethany Lutheran Home
Dow-Rummer Village
Ebenezer
Good Samaritan Village
Luther Manor
Mom & Dad's Nursing Homes
Southmoor Nursing Home
Sioux Falls Care Center

CLINICS

Chiropractic
Medical Orthopaedic
Medical X-Ray Center
College Health Services
School for the Deaf
School of Practical Nursing
Veterinarians
Pharmacists
Dentists-Doctors-Nurses
Family Homes

GOVERNMENT

Vocational Rehabilitation Division
Rehabilitation for the Blind
Sioux Falls Health Department
South Dakota State Medical Association
South Dakota Nursing Association
South Dakota Nursing Homes Association
State Department of Public Welfare
Health, Education, and Welfare

HEALTH-RELATED INTEREST GROUPS

Red Cross
Heart Association
Cancer Society
Hospital Lay Groups
Mental Health Association

APPENDIX E

HOBBIES

Hobby	Career	Influence & Relationship

APPENDIX F

SALARY CHART

Administrative Assistant	$ 8,286-11,220
Biochemist	10,800 (BS)
	12,500 (MS)
	15,800 (Ph.D.)
Certified Laboratory Assistant	5,604- 7,080
Computer Operator	6,456- 7,908
Computer Programer	8,484-10,860
Cytotechnologist	7,080- 8,500
Dental Assistant	3,600
Dental Hygienist	7,000
Dental Laboratory Technician	5.824
Dentist	29,000
Diagnostic X-Ray Technologist	6,612- 8,268
Dietitian	8,280-10,260
Electrocardiograph Technician	5,268- 6,420
Electroencephalograph Technologist	5,664- 7,080
Executive Housekeeper	6,396
Food and Drug Inspector & Analyst	8,098
Food Service Supervisor	5,252
Histologic Technician	6,396- 7,968
Hospital Administrator	10,000-13,000
Inhalation Therapist	7,176- 8,676
Licensed Practical Nurse	5,700- 7,140
Medical Assistant	6,500- 8,320
Medical Librarian	7,836- 9,864
Medical Record Administrator	8,316-10,000
Medical Social Worker	9,264-11,600
Medical Technologist	7,900- 9,900
Nuclear Medical Technologist	7,512- 9,000
Occupational Therapist	8,268- 9,984
Occupational Therapy Assistant	6,500- 7,800
Optometrist	25,000
Osteopathic Physician	25,000-30,000
Pharmacist	10,600-13,000
Physician	34,000-39,000
Physical Therapist	8,340-10,284
Podiatrist	21,500
Professional Nurse	7,900- 9,700
Psychologist	9,600 (MS)
	10,900 (Ph.D.)
Recreational Therapist	7,656- 9,204
Safety Engineer	9,732-11,400
Sanitarian	7,000- 7,500
Speech Pathologist and Audiologist	9,144-12,588
Sociologist	15,000
Technical Writer	5,000- 7,000
Vocational Rehabilitation Counselor	8,384-10,876

APPENDIX G

HEALTH CAREERS

H	A	B	F	D	E	U	N	A	I	C	I	N	H	C	E	T
T	T	P	H	A	R	M	A	C	I	S	T	R	J	O	H	M
N	S	C	A	I	Q	E	F	G	H	I	S	P	G	V	E	C
R	I	I	A	R	N	A	I	R	A	N	I	R	E	T	E	V
O	G	R	P	R	A	E	F	D	O	C	T	O	R	A	L	R
T	O	M	S	H	E	M	R	A	I	N	N	H	K	O	E	E
A	L	T	N	N	R	E	E	D	M	L	E	L	N	K	E	S
R	O	W	A	U	I	E	R	D	C	K	D	M	R	E	T	E
T	H	U	I	A	R	A	H	S	I	J	S	O	N	Q	S	A
S	C	K	C	G	O	S	O	T	U	C	W	A	C	O	O	R
I	Y	F	I	A	N	V	E	Z	L	L	C	H	Y	H	E	C
N	S	L	T	I	O	P	B	L	A	S	E	E	T	H	M	H
I	P	V	E	N	A	P	I	I	G	M	H	L	C	J	R	I
M	U	T	I	C	A	J	C	O	I	T	A	A	G	S	T	S
D	R	E	D	C	R	O	S	S	X	E	E	T	R	F	I	T
A	B	Y	C	X	S	D	T	D	H	T	Y	I	E	S	H	O

Circle the following words relating to health careers, either up and down, or across and diagonal:

Administrator
Chemist
Dentist
Dietician
Doctor
Nurse
Nutritionist
Paramedic
Pharmacist
Red Cross
Researchist
Social Worker
Teacher
Technician
Therapist
Veterinarian

APPENDIX H

EDUCATION FOR HEALTH CAREERS

HIGH SCHOOL

Ambulance drive
Correctional aide
Food service worker
Hospital service worker
Social welfare technician
Statistical aide
Ward clerk

HIGH SCHOOL PLUS SPECIAL TRAINING

Day care aide
EKG technician
Hospital orderly
Laboratory technician
Licensed practical nurse
Medical secretary
Nurses' aide
Optician

LESS THAN 4 YEARS OF COLLEGE

Dental assistant
Dental hygienist
Electronics technician
Inhalation therapist
Medical engineering technician
Registered nurse
X-Ray technician

FOUR YEARS OF COLLEGE

Dietitian
Food technologist
Medical librarian
Medical writer or illustrator
Nurse whith clinical specialty
Nursing supervisor
Public health engineer
Recreation therapist

MORE THAN 4 YEARS OF COLLEGE

Biochemist
Dentist
Optometrist
Pharmacist
Physician
Psychiatrist
Psychologist
Public health administrator
Surgeon
Veterinarian

A SURVEY UNIT OF CAREERS AND AVOCATIONS IN MUSIC

Prepared by

Norman Te Slaa

INTRODUCTION

The music career awareness unit is so structured that it can be presented either as a block of time or integrated into the semester curriculum. However, before the students attempt career activities, the teacher should take the entire class through the first section entitled "Exploring Musical Careers and Avocations". The suggested presentation time of this section is near the beginning of the semester. Hopefully, this will expose the students to the possibilities in music and give them the remainder of the semester to pursue the subject further.

Most careers or avocations in music should come under one of the seven major catagories. However, not all careers or avocations will be covered under these catagories nor dealt with in depth in the career activities section.

Presentation: If the teacher chooses to present the unit as a block of time, it is suggested to use four or five class periods. To integrate these materials into the curriculum is the most difficult but probably the most effective. It also has the potential of adding new meaning to some classroom activities throughout the semester. But by presenting careers in this way, the teacher must always be searching for possible ways to integrate career materials into the presentation.

Career Activities: The intention of the activities section is to suggest possibilities to the teacher in keeping with the basic objectives: provide students with an exposure to various career and avocational possibilities in music. There should be more activities suggested than can be used by one teacher. However, it is up to the teacher to pick and choose and, hopefully, include many of their own ideas.

OBJECTIVES

A. Provide students with an exposure to various career and avocational possibilities in music.

B. Explore special abilities, interests and hobbies and the potential they have in career or avocational choice.

C. Offer students an opportunity to see and hear some people in music in action.

D. Student exploration of special skills needed in various areas of music.

E. Provide students with the opportunity to explore two music careers or avocations in greater depth.

EXPLORING MUSICAL CAREERS AND AVOCATIONS

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Jobs in Music	Students will survey the jobs connected with music and try to determine their category.	Have students list as many jobs in music as they can. Use APPENDIX I. As a class, assemble a list using the bulletin board or a transparency of APPENDIX I.	APPENDIX I Mimeograph and Transparency
		In column two of APPENDIX I, try to determine a job category for each job listed in column 1. APPENDIX II and III can be used to determine varieties of jobs and their categories, e.g. P = performer, C = composition. Students can also help determine job categories and select a code.	APPENDIX II, III
Music - Career or Avocation?		Define "career" and "avocation". Discuss with the class how a career and an avocation differ. Then, as a class, determine which jobs can be a career or avocation and those jobs that can be both. Mark in column three of APPENDIX I.	
	To understand that a person may have many hobbies, interests and talents which may influence career or avocational choice.	In column IV of APPENDIX I, the students will try to rate their interest in the job given on that line and mark the appropriate column.	
		On APPENDIX IV, the student will list their interests and hobbies. Behind each, they will try to locate a musical career or avocation that might be appropriate. The class will discuss some of these interests and hobbies and how they relate to music.	APPENDIX IV

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Music - Career or Avocation? (cont.)	(same as before)	From the established categories (column two, APPENDIX I) the student can choose two categories of music careers. Students can then choose the two job possibilities that match their high interest rating. APPENDIX V can be used as a form to write a job description about these two choices.	Careers Kit Chronicle Occupations Microfile Your Future in Music (Whittier) Careers and Opportunities in Music, Rich, (Whittier) Performing Arts Occupations, (file) Career Opportunities in Music, Egbert, (file) Careers and Opportunities in Music, Biegeleisen, (file) Music Therapy As A Career NAMT (file) Careers in Music NASM, (file) Popeye and Fine Arts and Humanities, (file)

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Music - Career or Avocation? (cont.)		Related Activities:	
		Watch filmstrip. Shows life of a performing musician. Tells something about his training, jobs, other activities of teaching and composing.	People Who Create Art: #3, Musician, Guidance Associates (Whittier)
		Students poll ten adults to find how many and in what kinds of musical activities they participate.	
		Make a bulletin board showing various musical careers.	
		Design a collage showing people in musical careers or avocations.	
		The student is encouraged to contribute to a chart showing the basic requirements of various musical careers.	
	To assist students in self-awareness.	Students weite an essay, "If I could be ...."	
		A student may demonstrate or tell about their own interest related to music.	
		Interested students are tested for aptitudes and interests.	Musical Aptitude Profile by Houghton or
		Students from other schools or within the school talk to the classes about their activity in music and how it has led from an interest, talent or hobby to an avocation.	Musical Achievement Test, MAT, Follett

Subject Music

Grade Level 7th

COMPOSITION

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Serious Music Composer	Student determines how a composer uses music to express self.	Student tries his ability to compose. Two situations can be simulated. To compose out of inspiration of commission.	
		Arrange for a visit by a local composer.	Local colleges
		Student reads of listens to a short bibliography of a composer.	Cassette Studies Unit, School Library Ernst Von Dohnanyi (Whittier)
Commercial Music Composer	Student determines how a composer uses music to sell ideas, goods, and services.	Student contacts local radio or TV station to inquire about needed advertisement. Student then attempts to write a musical advertisement to fulfill this need. Submit this advertisement to the station and hope for usage.	
		Student will perform a musical jingle used frequently in radio and/or television advertising.	
		See Sales and Promotion section - Advertising.	
		Working under a deadline, the student attempts to use some form of music to sell a product.	

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Popular Music Composer	Expose students to methods of composition and explore their ability to compose popular music.	Student observe "How a Rock Tune is Written".	
		Student list the steps involved.	
		Student follows these steps and attempts to write a rock tune of his own. Possible to use the tune for an advertisement.	
		Use book about rock for reference material.	How to Form a Rock Group, Lieber
Copyist	Explore the skills necessary for work as a copyist.	Teacher will give a short demonstration on the tools used by a copyist and how they are used.	
		Student explores own skill in using these tools. Attempt to take an original student composition and put into copy form.	Copy paper Printing tool (see packet)

Subject Music

Grade Level 7th

MUSIC IN EDUCATION

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Public or Private School Music Teacher	Student attempts to discover challanges and rewards in teaching	Read various descriptions of the work of a teacher. Student take a survey of their teachers. Attempt to find out about education required, number of years as a teacher, likes and dislikes and other questions the student feels important. (see APPENDIX VIII used as a sample form) View filmstrip about music education. Student or teacher prepare a short presentation showing the work of a teacher. Items included should be job preparation, job description, availability of positions, pay scale, etc.	Careers in Music (file) Occupational Microfile Card #20 Largo, Career Exploratory Kit (Whittier) A Career in Music Education, MENC (file) Largo, Professional Careers Kit Music: A Teaching Career, MENC (Whittier) State Employment Office
Private Instruction		Student interview their own private teacher and report back to the teacher or the class about their work. Visit by local private music instructor to the class. Student be given an opportunity to conduct or simulate a sample lesson.	Local Education Association or Union

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Music Critic, Editor and Writer	Student tries to understand the work of a music critic or music editor.	Student collects columns from local, state, regional or national sources. Compare them to find out different musical activities in various parts of the country, how and why these columns are written. Students collect examples of critical reviews of musical events and (1) present one to the class or (2) study several reviews rather carefully to try to find out how and for whom each is written. Students interview a local music writer, editor or music critic.	Local newspapers College papers Neighboring small town papers Regional and National newspapers
	Student gains some insight on how the critic, editor and writer are public educators.	Students attend a local concert and write up a critical review to be published in the school or local city paper. Have a student write program notes for a school or community musical event. If possible, put them into print in the school or public papers.	

Subject Music

Grade Level 7th

MUSIC INSTRUMENT MANUFACTURE AND PRINTING

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Printing	Student explores ways of writing music using various tools and materials.	Prepare a report on various ways of printing music.	
		Experiment with and demonstrate to the class the way a music copyist prepares a musical score. (see also COMPOSITION - Copyist)	See packet.
Sound Equipment		Student visits a sound studio, music store, or radio and television studio. Examine various kinds of sound equipment, costs and their operation	Electronics stores local radio and T.V. stations, local recording studio

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Organ Builder	The student will explore the need for trade skills in the music industry.	Students view frilstrip showing people using manual skills. Students can list ways in which a single instrument builder will touch people. The process beginning with the purchase of raw materials to the person who listens to the instrument. Local organ builder visit the class. Vist the workshop of an organ builder.	"People Who Make Things", Guidance Associates (Whittier)
Instrument Builder	(same as above)	Read job description of instrument maker. Using various materials and tools, a student will construct a simple musical instrument. Student chooses, orders, pays for, and assembles an instrument kit.	Chronicle Occupational Microfile, Card # 43 (Whittier) Peripole catalog (file)

Subject Music

Grade Level 7th

PERFROMING MUSICIANS

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Perfroming Musicians	Students explore general characteristics of a performing career in music.	Listen to cassette recording on the work day realities of a professional musician	The Working Musician Center for Cassette Studies. (Whittier) Music Code of Ethics (Whittier) Music is My Business (Whittier)
Conductors and Music Directors	Students examine the characteristics of a career or avocation in conducting.	One student will play a song on melody bells or instrument of their choice. Several more students will be asked to join him. The teacher will accompany on the piano or autoharp and another group provide a rhythmic ostinato. The students will then discuss the need for a conductor. Students take a survey of all conductor positions within the community, to include orchestra, bands, churches and schools. Should have some idea of the duties required of each, pay received and education needed. Can be followed by a report to the class. Students interview a local conductor of any community group. Visit to the class by a local conductor.	Classroom melody and rhythm instruments

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Vocalist	Student examination of the characteristics of a career or avocation as a vocalist.	Job descriptions.	Occupational Microfile Card #20 (Whittier) Awards for Singers (file)
		Students conduct interviews with 5 people who do some sort of singing each week. Students will determine if they are paid and if so, how much. APPENDIX VII, THE INTERVIEW WORKSHEET, can be used as a guide for the interview.	
		Have a local singer come to the class and talk about their career or avocation as a singer.	
		Read about Music As A Business. This brochure is mainly concerned with the performing musician.	Music Is My Business (file)
		Students interview the secretary for the local Musicians' Union.	Music Code of Ethics (file)
		Speak with the local military service representatives and find out about military music careers.	

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Instrumentalist	Students will examine the characteristics of an instrumental career or avocation.	Read a job description.	"The Performing Arts" Occupational Outlook Handbook (Whittier) Occupational Microfile Card # 20 (Whittier) Largo, Professional Careers Kit, see Musician "The Symphony Musician" Your Future in Music pp. 54-64 (Area School)
		Students conduct an interview using a tape recorder. Interview local professional instrumentalists or those visiting the community for a concert. Students should be prepared to play back the interview for the class.	Community Concert Performers Local Colleges Performance Calendars
		Vist to the class by a professional or semi-professional musician.	
		Attend a concert or a rehearsal. Observe the performing musician at work. While the students are attending the concert, they could also function as a music critic.	Community Performing Groups Community Concert Series

Subject Music   Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Popular Musician	Students will examine the characteristics of a career or avocation as a "pop" musician.	Any student in the class who plays in a group could talk to the class about that group. He could include such topics as group formation, costs, finding a job, practice, pay, and the future.	
		Read about a rock star. Various biographies of rock musicians. Can read all or in part. Written for grades 5-10.	Rock Star, Collier (Whittier)
		Visit and observe a perfromance by a local, professional pop musician.	Consult South Dakota Arts Council
		Student interviews of local pop musicians.	Local newspapers of musical events
		Interview a band or member of a band that has cut a record.	Local jazz musicians
		For those interested, read about the how of forming a rock group.	How to Form a Rock Group (Whittier)

Subject Music

Grade Level 7th

SALES AND PROMOTION

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Disk Jockey	Student explores ways a disk jockey uses music to promote and sell goods and services.	Read job description on "Disk Jockey" Students conduct a taped interview with a local disk jockey. Report back to the class.	
	Understanding the work of a disk jockey.	Visit to the class by a local D.J. Field trip by the class or individual to a radio station to see the disk jockey in action. Student simulate the work of a disk jockey for the class after visiting a radio station. This should be done only after considerable study or actual observation.	
Music Store	Student becomes familiar with the problems and rewards of owning or working in a music store.	Read about "Music Store Clerk"	Largo, Career Exploratory Kit
		Student visits a music store. Speaks with the manager and/or clerks and finds out about their work. Questions discussed should include money involved, establishing a name, how musical styles affect their business, decisions to be made, etc.	Local music stores and record shops

Subject Music

Grade Level 7th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Advertising	Student explores possible ways to use music in radio, T.V. and recording.	Read about "Radio-Television Announcer"	Largo, Professional Careers Kit, under Entertainment Careers (Whittier)
		After viewing a television program, the student will list the ways in which music was used.	
		Students listen to the radio and be able to list or perform or tell how music was used in radio sales.	
		Student can write a parody on a favorite tune, using the tune to sell a product.	
		People outside of music, e.g. business, come to the class and explain how & why music is used in their work.	Department stores, professional buildings
		Students interview people in the community to find out how they might use music in their work.	
		Students interview the personnel of a recording studio to find out how the music is made for use in business.	Recording studio or commercial music services
		View film partially concerned with production and usage of electronic music.	The Incredible Machine (Bell Telephone)
		Students visit a T.V., radio, or recording station. Find out how music is used, who prepares the music, how it is prepared, how one obtains commercial music, and the demand for it in the local area.	

Subject Music

Grade Level 7th

MUSIC SERVICE CAREERS

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Piano Tuner	To discover vocational and avocational possibilities in a music service job.	Read about "Piano Tuner".	Largo, Semi-Skilled Careers Kit, (Whittier) Occupational Microfile (Whittier)
		Visit to the class by a local piano tuner. (Could be done while the tuner is in the school for the yearly piano tuning). Student will try their skill at tuning the piano in the presence of the tuner and other students.	
		Interested students may accompany the tuner on the job.	
		Visit to the class by a representative or a student of a vocational school in instrument repair and tuning.	Western Iowa Tech. Sioux City, Iowa
		Make a bulletin board using pictures of people in instrument repair and manufacturing careers.	
Instrument Repair		Visit to the class by the local band director to find out what repair problems he encounters and the repair work he does himself.	
		Field trip to music shops to see repair departments. Read job descritions.	Occupational Microfile Card # 48 Whittier)

Subject Music

Grade Level 7th

MUSIC AS A THERAPY

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Music Therapist	Acquaint students with the potential for using music as a theraputic tool.	Read a brief description about the work of the local music therapist.	Argus Leader, May 27 1973 (file) Music Therapy As A Career, (file) Largo, Professional Careers Kit, Section 079, (Whittier)
		For interested students, a detailed account available in the "Music Therapists Handbook"	Music in Therapy, (Whittier)
		Have a local music therapist visit the classes to tell about the work of a music therapist.	
		Interested students view films, video tapes, and slides on music therapy.	A Song for Michael The "I" in the Beat Music with a Capitol T Music Therapy in Mental Retardation
		Visit a public service institution. Observe the possible benefits of using music as a therapy for handicapped children. Could be combined with a performance.	School for the Handicapped

Subject Music

Grade Level 7th

SELECTED REFERENCES

Printed Materials:

"A Career in Music Education", Music Educators National Conference $1.00

"Awards For Singers", Central Opera Service, $1.00

Careers Kit, Largo

"Career Opportunities in Music", Marion S. Egbert, American Music Conference, 1966, $1.00

Biegeleisen, Jacob. *Careers and Opportunities in Music*, E.P. Dutton 1969, $4.95

Rich, Alan. *Careers and Opportunities in Music*, E.P. Dutton, 1964, $4.95

"Careers in Music", National Association of Schools of Music, single copy free

How to Form a Rock Group, Grossett, 1968, $3.95

Musical Achievement Test, (MAT), Follett

Musical Aptitude Profile, Houghton

"Music Code of Ethics," National Federation of Musicians, single copy free

"Music is My Business", National Federation of Musicians, single copy free

Gaston, E.Thayor. *Music in Therapy*, Macmillan, 1968

"Music Therapy As A Career", National Association of Music Therapy, 1969, .03¢ ea.

Occupational Outlook Handbook, U.S. Government Printing Office

"Perfroming Arts Occupations", U.S. Government Printing Office, #1650-39, 1970, 15¢ ea.

Popeye and Fine Arts and Humanities, King Features

"Vocalists", Chronicle Guidance Publications, Occupations Brief #436, .35¢ ea.

Printed Materials cont.

"What's Good For The Students", MENC, 1971, 5/$1.00

Curtis, Robert E. Your Future in Music, Richards Rosen Press, 1962

Films:

"A Song for Michael", Music Therapy Center, 16mm, b/w, 22 min., $25 rental

"The Incredible Machine", Bell Telephone, 16mm, color, 25 min. free

"The I in the Beat", 16mm, b/w 18 min. $25 rental

Filmstrips:

"Music: A Teaching Career", MENC, 1969, $10 rental

"People Who Create Art", Guidance Associates, color, 9 min.

"People Who Make Things", Guidance Associates, color, 8 min.

Tapes: (Cassette and Video)

"Ernst von Dohnanyi", Center for Cassette Studies

"Music Therapy in Mental Retardation", (video) Pincrest State School, free

"The Working Musician", Center for Cassette Studies

Microfile:

Chronicle Occupational Microfile, Moravia, N.Y.

Other:

"Music with a Capital T", (slides) National Association for Music Therapy with audio tape, 12 min., two week delivery, $5.00 rental

APPENDIX I

CAREER AWARENESS SHEET

POSSIBLE JOBS IN MUSIC	CATEGORY	MUSIC		INTEREST RATING		
		CAREER	AVOCATION	HIGH	MIDDLE	LOW
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						

APPENDIX II

CATEGORIES OF MUSICAL CARERS AND AVOCATIONS

COMPOSITION
- Serious Music
- Commercial Music (radio, movies, T.V.)
- Popular Music
- Arranger
- Copyist

EDUCATION
- Private or Public School teacher or director
- Private Music Teacher
- Music Critic and Reporter

MUSIC INSTRUMENT MANUFACTURE AND PRINTING
- Printing
- Sound Equipment
- Organ Builder
- Instrument Builder

PERFORMANCE
- Church Choir Director
- Band or Symphony Conductor
- Dance Band Conductor
- Rock Band Leader
- Community Shoir Director

- Choir Member - Church or community
- Night-Club Singer
- Radio and Television Singer
- Recording Artist
- Professional Chorus
- Opera Soloist
- Concert Soloist

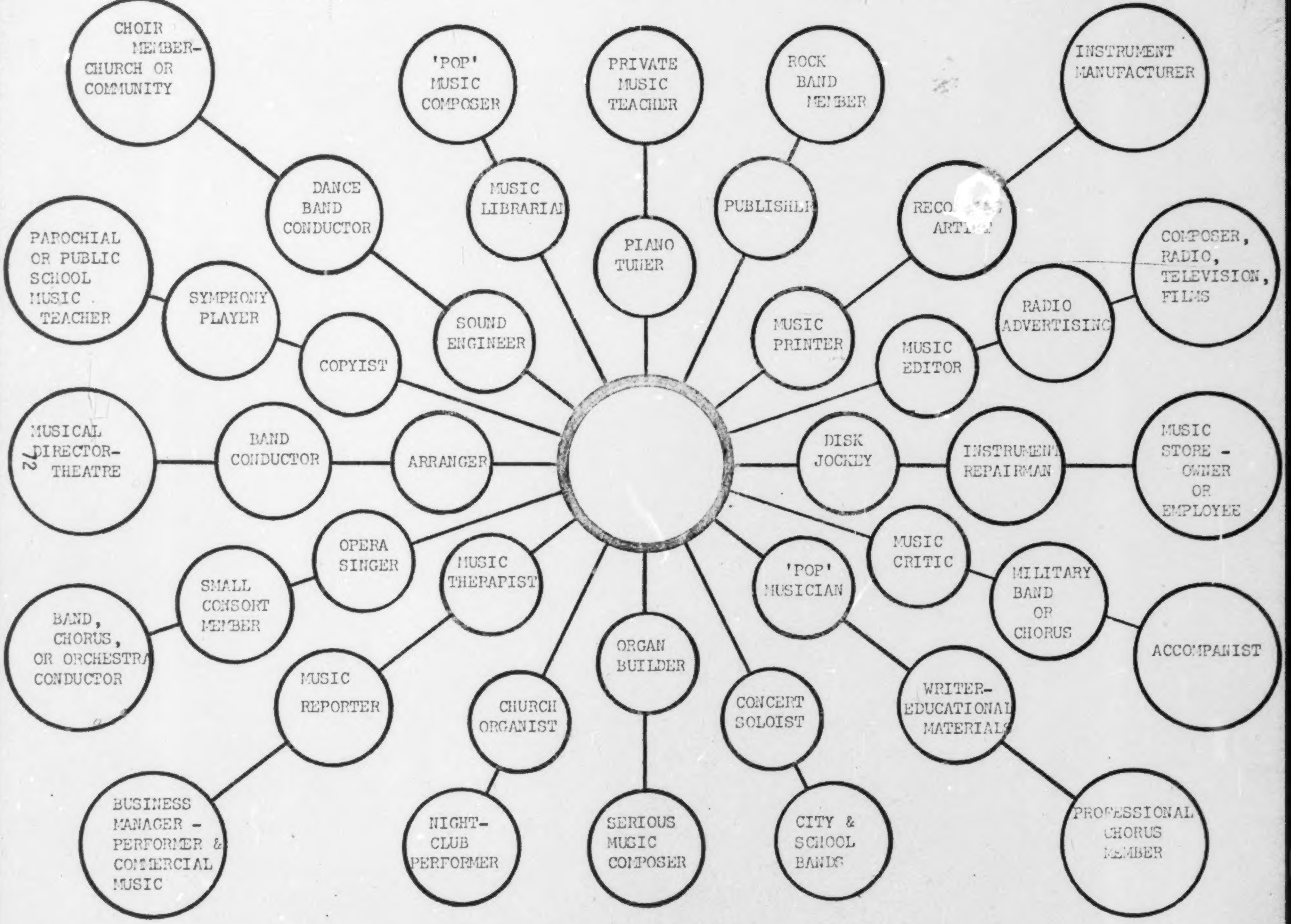
PERFORMANCE (Cont.)
- City and School Bands
- Radio and Television
- Theatre and Drama
- Symphony Orchestra
- Small Consort
- Popular Music Performer
- Accompanist and Organist
- Dance Band
- Concert Soloist
- Military Band or Chorus

SALES AND PROMOTION
- Disk Jockey
- Music Store
- Advertising
  - Radio, T.V., Recording
  - Sound Engioneer
- Publisher
- Business Manager for Performers and Commercial Music
- Music Editor
- Educational Music Materials

SERVICE
- Piano Tuner
- Instrument Repair

MUSIC THERAPY
- Music Therapist
  - Hospital
  - Corrective Institutions
  - Clinics for Handicapped Children

APPENDIX III


CHOIR MEMBER- CHURCH OR COMMUNITY
'POP' MUSIC COMPOSER
PRIVATE MUSIC TEACHER
ROCK BAND MEMBER
INSTRUMENT MANUFACTURER
DANCE BAND CONDUCTOR
MUSIC LIBRARIAN
PUBLISHER
RECORDING ARTIST
PIANO TUNER
PAROCHIAL OR PUBLIC SCHOOL MUSIC TEACHER
SYMPHONY PLAYER
SOUND ENGINEER
MUSIC PRINTER
RADIO ADVERTISING
COMPOSER, RADIO, TELEVISION, FILMS
COPYIST
MUSIC EDITOR
MUSICAL DIRECTOR- THEATRE
BAND CONDUCTOR
ARRANGER
DISK JOCKEY
INSTRUMENT REPAIRMAN
MUSIC STORE - OWNER OR EMPLOYEE
OPERA SINGER
MUSIC THERAPIST
MUSIC CRITIC
SMALL CONSORT MEMBER
'POP' MUSICIAN
MILITARY BAND OR CHORUS
BAND, CHORUS, OR ORCHESTRA CONDUCTOR
ORGAN BUILDER
ACCOMPANIST
MUSIC REPORTER
CHURCH ORGANIST
CONCERT SOLOIST
WRITER- EDUCATIONAL MATERIALS
BUSINESS MANAGER - PERFORMER & COMMERCIAL MUSIC
NIGHT- CLUB PERFORMER
SERIOUS MUSIC COMPOSER
CITY & SCHOOL BANDS
PROFESSIONAL CHORUS MEMBER

HOBBIES AND INTERESTS

APPENDIX IV

In the column on the left, give as many hobbies or interests that you might have. Next, lock through the list of jobs related to music and see if you can match you hobbies and interests with a musical career or avocation.

HOBBY OR INTEREST	POTENTIAL MUSICAL CAREER OR AVOCATION
1.	
2.	
3.	
4.	
5.	

APPENDIX V

JOB DESCRIPTION FORM

JOB TITLE	CATEGORY	DESCRIPTION OF WORK INVOLVED	PAY	SPECIAL ABILITIES	EDUCATION REQUIRED	ADVANTAGES	DISADVANTAG

APPENDIX VI

SPEAKER EVALUATION WORKSHEET

EXAMPLE

Complete the first two items before the speaker arrives.

Occupation or avocation of the guest speaker: ______________________________

List two things you want to look for or learn from the guest speaker:

A.

B.

****

1. What special skills or interests are important in this career or avocation?

2. What education or training is required for this career or avocation?

3. Did the speaker use works that you could understand?

4. List some things you learned from the guest speaker?

5. What questions, if any, were not answered by the speaker?

6. Would you like to talk to the speaker in person or have more information on the subject?

OTHER NOTES AND COMMENTS:

APPENDIX VII INTERVIEW WORKSHEET EXAMPLE

Name of person interviewed:______________________________

Place of employment____

Job title______________________________

1. What kinds of things do you do in your work?

2. What special abilities or skills do you need for your work?

3. Did you have to go to school for your job? How long?

4. What do you like most about you work?

5. What do you enjoy least about your work?

6. Does your work pay well?

7. Is it difficult to get into this occupation?

APPENDIX VIII

SURVEY WORKSHEET

EXAMPLE

Survey Number	Total Years of Education	Total Years of Experience	Likes & Dislikes	Comments & Quotes
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

APPENDIX IX

FIELD TRIP QUESTIONAIRE

EXAMPLE

Complete the first two items before the field trip.

Destination of the field trip ______________________________

List three (3) observations you want to make while on this field trip

A.

B.

C.

* *

1. What musical careers or avocations did you observe during this field trip?
2. Does this career or avocation require much money to begin?
3. What education is required?
4. List several things you observed that were typical of the career(s) or avocation(s) you have visited.

5. Were those who spoke with you easy to understand?
6. What economic decisions were made by the people in the career or avocation you visited?
7. Were your questions fully answered?
8. How did this field trip help you to learn more about musical careers or avocations?

8th Grade

HOME ECONOMICS

Prepared by

Ms. Rebecca Goebel

INTRODUCTION

Home Economics is one of the most exciting fields for women and men today, yet too little is known about the many and diverse careers students may enter. The problem is to learn about careers in home economics and how to prepare for these careers.

It is the purpose of this project to acquaint students with opportunities in the field of home economics. This will be implemented by "sprinkling" discussions and activities along with field trips and guest speakers throughout the school year, covering a period of about 10 days in four areas of home economics; which are, family relations, foods, clothing, and child development. Orientation should be started in 8th grade, leaving them the necessary time to do research, to select possible careers in home economics. It also leaves them time to take in high school required courses for admission to the career of their choice. The list of activities far exceeds the time limit of 10 days, therefore the individual teacher has the option to choose these which would be most profitable for her particular class.

OBJECTIVES

A. Acquaint students with job opportunities in the area of home economics.

B. Student knows and can identify clusters and a broad variety of job opportunities and can readily use available resources on career information.

C. Give students opportunities to identify with, choose and understand better the work of an occupation as evidenced by their investigations of the occupation.

D. Realize the opportunities open to women of today, the important role women play in the world of work, and the changes they have made towards this world.

E. Help students develop skills which are beneficial now and can be built upon tomorrow as evidenced by their willingness to practice and their degree of performance.

F. Students should be able to evaluate tentative career choices in terms or ways it will contribute to the maintenance of a positive self concept.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Family Relations	Acquaint students with job opportunities in the field of Home Economics	The students will work in groups to compile a list of jobs related to home economics. Display posters "Careers in Home Economics". Make a chart of the main classifications of H,E, jobs in the community (skilled, unsilled, professional). To which group do most people belong? Where are jobs oped today? What jobs will be open in the future? Discuss why wages seem to be higher in some jobs rather than others. Then list factors (education, personal atributes, satisfactions expected from the job) which are needed. Which would be most important to her in selecting an occupation? On the board, compile a general list of those which were mentioned most frequently by the groups. Develop a group composite, and rank their wants according to importance. Discuss the meaning of the results as it relates to individual values.	Poster Display "Careers in Home Economics" (Area School - IML)
	Relate how Home Economics has benefited the particular student	Each student tell of one new idea she has gained from class that could lead to a career or could make her more employable. The student will identify H.E. skills in which she is most proficient and plan to further develop these skills. The student will then identify the skills needed for a particular occupation. She could survey others (parents, teachers, friends) to determine how they rank honesty, money, and co-worker relations in order of the importance of these values in choosing a career. This should lead into a discussion of their values and weigh the costs an individual faces and sometimes compromises when she takes a job.	

Subject Home Economics

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Family Relations cont.	Evaluates the use of her time in terms of the meaning it has for her and makes realistic plans to use her time as effectively as possible.	Discuss the relationship between work-play-creative leisure in relation to future: a. income b. social status c. job advancement d. standard of living e. personal health f. marriage - with or without children Make comparisons of these relationships.	
	Identify psychological needs not satisfied on the job and the ways these needs can be met in other activities.	Identify the leisure time activities available in the community. Have students chart the leisure time activities of an adult worker, and then chart their own leisure time activities (considering school their job). Discuss how leisure time activities complement their job (school) requirements. Have students evaluate the use of their time in terms of the satisfaction they reveive and how these activities contribute to personal development. Students could list a number of leisure time activities that would be meaningful to them if they were employed in their preferred occupations, and then rank several kinds of leisure time activities in terms of the value of the activities to them as students, and as future employees.	

Subject Home Economics Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Family Relations cont.	The student will assess her self interests in terms of various home economics related occupations.	Each student will make an individual list of school subjects, clubs, hobbies, and home tasks. She will then indicate her feeling on each. The student will also indicate the area to which this subject or hobby belongs - mental, manual, or artistic. These interests will be compared to a H.E. related occupation in which she may be interested.	
	Analyze the skills and activities related to various hobbies and interests which may influence career choice.	The student can analyze through group discussion the catitivities and skills which she has experienced in H.E. class that may lead to a related career. Select a list of activities and have students classify according to work-play-creative leisure. Discuss results in terms of how these activities vary in classification. The class could develop a bulletin board of hobbies and interests and show their relationship to possible job opportunities in H.E.	
	Affirm the need for girls to make vocational plans and prepare for careers.	Look for illustrations from real life of people who have contributed to society through the field of H.E. (Ex. designer, Mary Quant). Discuss what these people have done to better the lives of other people. What are the benefits of such a career? How can students begin to prepare for such a career?	Readers' Digest biographical reference books, home economics journals, various people

Subject Home Economics

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Family Relations cont.		Have students interview a person in their community they feel has made the community a better place to live. Look for attitudes in the person that are brought out through her work and how other people around her are affected by these attitudes. Students could work together as a class to make a list of questions to ask for this interview.	
	To learn that there is help available right in their community for girls interested in an education without the funds necessary.	Career Day: Each year one of our senior high school students planning to major next year in home economics wins a scholarship from the Sioux Falls home economics clubs. This student could be invited to the school to give a short talk on why she chose home economics and her particular career.	
		From her visit, students in the class could develop a bulletin board, "Stepping Stones to a Satisfying Job". They could suggest captions for each stone and have them leading to a picture of a person who looks happy and content in her work situation.	
		Show filmstip, "Jobs for You, Its Happening in Home Economics". Follow-up with questions and class discussion. Note the many jobs in home economics that are opening up to men. What effect will this have on our society?	Filmstrip: "Jobs for You, Its Happening in Home Economics" (Whittier)

Subject Home Economics Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Family Relations cont.	Be able to draw conclusions as to wheather the student, as a woman, should plan and prepare for a career.	Ask students who have working mothers to raise their hands. Then have students determine the actual job title of the working mother, and write these on the board. Note that many of the occupations will be semi-skilled, low paying jobs. Have these students interview their mothers to determine why they are working. From this, the students can craw conclusions as wheather women should plan and prepare for a career.	
	Realize the opportunities open to women of today. Realize the important role women play in the world of work, and the changes they have made towards this world.	Bring to class illustrations of women in the community working at jobs comparable to those usually held by men. Have student write a theme describing how the changing role of women may affect their future lives. For instance, how does the make view the female worker in the future, or how does a girl see herself in a working role of the future? Have girls visit a company where there are women employed, and following the visit, have them discuss the importance of women on certain jobs they observed. Discuss the problems men have working with women supervisors, and vice versa.	
		Illustrate and discuss how jobs affect dress. (Example: women wearing slacks)	
		Have a woman from the business world talk to class about problems she encounters in gaining acceptance, moving ahead, etc.	

Subject Home Economics

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Family Relations cont.		Work in small groups to complete the following: a. some women like to work outside the home because ... b. whether or not his wife works, a husband has the right to expect her to ... c. when mothers work, children usually ... d. when a mother goes to work, her husband may have to make changes in his life style, such as ... Follow up this activity with a class discussion.	"Suggested Teaching Approaches for Career Development in the Curriculum" (U. of Minnesota)
	Determine attitude toward work of women, as compared to men working on the same job.	Have students discuss their own attitudes toward women working. This could include a discussion of how cultural values may influence their attitudes toward women working.	
		Show filmstrip: "Marriage and Career". Organize a panel to study and discuss causes of unemployment, career opportunities for women, and job opportunities for the uneducated and untrained. Conduct a survey of community employment in terms of sex and average age range of workers. Make some analysis of what work is different age groups and the two sexes.	Filmstrip: "Marriage and Career", Popular Science Pub. Co.
		Utilize the word association game. See APPENDIX A, or make up your own words.	

Subject Home Economics

Grade Level 8th

APPENDIX A

WORD ASSOCIATION

Association with key words can be used to discover individual and group attitudes. Ask each person to write down the first word that comes to mind in connection with any of the following terms. You may want to use only ten or twelve terms at a time. Follow up with group discussion to allow learners to express and exchange ideas.

Value

Goal

Budget

Savings

Consumer

Social Worker

Cook

Seamstress

Dietician

Nutritionist

Merchandiser

Retailer

Waitress

Manager

Baker

Designer

Inflation

Services

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods	Become aware of vocational opportunities in the food service industry.	Investigate how the 80 million people who eat out each day depend upon food service workers for good health. Discuss importance of these jobs. Large food and service companies employ skilled and professional people to develop new products, recipes, and ways of using company output. Make a list of these companies which could be found here in Sioux Falls. What government agencies hire home economists? Discuss types of work they do, (preparing recipe booklets, and brochures, conducting radio and television programs, and developing educational materials.) Have students make a survey of local food service establishments and the types of service they offer. Use local examples to illustrate these points. List those which are profit oriented, and those which are service oriented. Discuss how this difference would affect kind of service given, personnel employed, and working conditions. How do these establishments differ according to: a. number of people it employes? b. operating costs? c. number of people they serve each day? d. orientation toward family or adult? Which restaurants are combined with other business? (Ex. - Walt and Mary's -- food and bowling)	

Subject Home Ec

Grade Level ________________

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods, cont.	Recognize and understand the role of food service workers who are involved in serving food.	Examine menus of local restaurants to discover types of service. Display the basic types of menus used, (a la cart, table d' hots, and carte du jour). Define them and point out how they are used. Divide class into two teams and see which side can stand longer when asked to define terms used on a menu, (such as: saute, julienne, augratin, au jus, and shishkebab). List types of occupations for which there is on-the-job training. Students could put up a bulletin board, "Airing Food Service Careers", picturing a clothes line with words such as: "waitress", "salad girl", "kitchen aid", "hostess", and "head cook" written on the clothes.	

Subject Home Ec

Grade Level

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods, cont.	Student knows and can identify clusters and a broad variety of job opportunities in food service and can readily use available resources on career information.	Discuss restaurant organization and various jobs in restaurant management. See Appendix B. Students will become aware of the number of jobs associated with a restaurant. Hand out pamphlet, "Careers for Youth in Food Service Industry", to read and discuss. Have a resource person, such as a restaurant manager, list personnel qualities which are needed for jobs of this type, the types of jobs available, and what is expected of an employee concerning human relationships in food service work. Investigate qualifications for food service occupations, and give reasons for having well-trained people in food service occupations. Students can ask questions as what compromises he had to make in attaining his vocational goal, and how can students work into a high paying job in food service. He could tell the class about food costs in relation to business profit and customer satisfaction. Have him point out work in which all employees may help in keeping food and operation costs down. The students could then plan for preparation and proportioning of certain foods and practice computing the cost of servings. Discuss utilizing food surpluses and leftovers.	"Food Service Occupations" The University of Texas "Careers for Youth in Food Service Industry" National Restaurant Association.
		Show film, "New Horizons in Food Service Careers," Each student write a summary of the film.	"New Horizons in Food Service Careers" National Restaurant Association.

Subject Home Ec

Grade Level

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods	Realize that customer employee relationships are an important part of an establishment's public relations.	The students could bring out experiences where they have received poor service. What skills would these people have needed in order to do a better job? The students could then role-play suitable responses to typical difficult situations which might occur when serving food (ex. waitress has spilled coffee on a lady; waitress gave the wrong order to a customer.) How can they apply this to experiences they are now having in the classroom How will this help them to work as a unit in the classroom kitchens? After participation in the annual tea and style show, the student can list her specific contribution toward its success.	
	Understand the importance of sanitation and safety in food services. Help students develop skills which are beneficial now and can be built upon tomorrow as evidenced by their willingness to practice and their degree of performance.	Field trip to commercial kitchens and storage facilities (perhaps the school's cafeteria kitchen.) Student evaluate facilities according to check list. Note unsafe practices which were observed. Students determine accidents which may occur in each work area of the kitchen and ways they could be prevented. On returning to class have students discuss how one worker's carelessness in the kitchen might cause harm to other workers. Students could develop a check list for work simplification procedures. Plan a work schedule which dovetails operations and avoids duplication of effort. Discuss how it is possible for a worker to seem to be working all the time yet actually produce so little.	

Subject Home Ec

Grade Level ______

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods	Compare how work simplification contributes to efficiency and avoids duplication	Invite school cook to share her experience with time and motion-saving techniques. She could demonstrate the proper use of utensils such as paring knives, peelers, and can-openers, stressing safety precautions.	
	Recognize and understand the role of food service workers who are involved in serving food.	Have the supervisor of hospital food service speak to to class about the duties and responsibilities of workers. Describe tasks and responsibilities which are a part of food service occupations, such as how to save time and energy in food preparations, and how they can apply this to daily life as well as occupation. She could also discuss the opportunities open to girls who major in foods and nutrition in college, and the jobs in this area for girls who do not care for college.	
		Any girl interested in the field of dietics or food service, could read the book, Your Future as a Dietician or Your Future in Food Technology, and give a report to the class. Both books are available at the Area School.	
		Discuss the responsibilities of working in food service, and the necessity of cleanliness and sanitation in order to prevent food poisening. Show filmstrip on industrial food poisening, "The Unwanted Four."	Filmstrip and record "The Unwanted Four" National Restaurant Association (available Area School)

Subject Home Ec

Grade Level

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods		Exhibit some examples of health foods and locate advertisements in magazines and newspapers, and on T.V. which make food claims dealing with pills, especially grown or processed foods, and food supplements. 1. What are the "real costs" of these foods and/or pills to the consumer? 2. Who benefits from the sale of health foods? 3. What careers can you think of that might apply in this area.	"A Guide for Foods and Nutrition" ~~Athens, Georgia~~
	Learn about other opportunities open through the foods industry.	Explore other opportunities open in the foods area in addition to food service, such as H.E. jounalism. For girls with writing skills there are career possibilities with magazines and newspaper publishers. In order to help consumers use their resources wisely, experts are employed to write newspaper columns, technical bulletins borchures, package direction, and equipment and appliances manuals.	
		Each girl could bring an article from a woman's magazine which was written by women. Read and discuss these in class. "Women's Day" has a selction in its magazine of articles from readers on helpful hints and short qurks from real life. Students could write short articles during class for an activity. Some of the best ones could also be placed on the board for display. The magazine also has a section for making useful projects from an item that was made for another purpose.	

Subject Home Ec

Grade Level ______

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Foods, cont.	Cont.	The students could read through some of these and perhaps come up with some projects and ideas of their own. A bulletin board could be made of the clippings from the magazine and those which the girls bring. Discuss the opportunities, the possibilities, the qualifications, and the satisfactions from this career?	
	Explore various qualities observed which students may want to develop.	Fold a piece of paper in half. On one side list the traits and qualities desired in a friend. On the other side list the traits and qualities you would look for in an employee if you were in the position of hiring a person for a job. Unfold the paper and compare the lists Discuss reasons for similarities in the characteristics in both lists.	
	Research careers in H.E. that are funded through government.	Our federal, state, and city governments have laws to protect the foods we eat. The federal and state governments have pure food laws and laws concerning food weights and measures and food containers. They also set standards for grading and labeling food. State and city health departments set standards, require medical examinations for food handlers, and inspect conditions. What careers can students see while studying this unit? Girls who are interested could write to government agencies for information.	How You Plan and Prepare Meals Textbook

Subject Home Ec

Grade Level

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Clothing	Acquaint students with job opportunities in the clothing apparel industry.	On an overhead, or chalk board, outline a large question mark. Students can brainstorm on what questions they have regarding jobs in the clothing industry. Record all questions for discussion. Explain the five levels of education and what jobs are available at each level. See appendix C. Class discussion of various jobs associated in clothing retail industry. Compile a list of questions to ask a department sales manager of women's apparel. Ask speaker to the school to answer girls questions. Then conduct a follow up discussion. Were all questions answered? Have students determine rewards of various occupations at different levels within the occupation. Fill out Appendix D.	"World of Work Project" North Dakota
	Observe the interaction of co-workers in situations which call for cooperation and determine any changes she might make in order to work efficiently.	A student interested in clothing careers will visit a dry-cleaning establishment, and observe the interaction of workers, noting those jobs in which cooperation was necessary. She will list changes she may have to make in order to work efficiently in a similar situation. 1. How will this trip affect the care you will take with clothes from now on? 2. How does this cooperation apply to her behavior in the clothing lab? Individual Assignment: students could collect newspaper clippings and want-ads to any job relating to Home Economics.	

Subject Home Ec

Grade Level ____

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Clothing, cont	Identify with, choose and understand better the work of an occupation as evidenced by their investigation of the occupation.	Look through the yellow pages of phone book and record the companies related to the clothing industry. As a fun project, the girls could make projections of work people will someday be doing in this area. Field trip to fabric store: find all types of jobs applied here (store manager, buyers, janitor, sales personnel, display coordinator, and alteration workers). 1. What degree of education do each of these people need? 2. What personnel qualities have they mastered? 3. What skills are necessary? Fill out field trip report. See Appendix E. Look at display windows for fabric stores. Which ones are more effective in attracting your attention and why? (This could also be done with pictures in magazines.) Describe to students how the areas of Home Economics in clothing could be expanded, such as home economists in advertising. 1. What opportunities are open in this field? 2. What demands will be made upon her? 3. What fundamentals and skills must she master? 4. What type of mannerism must she develop for working with people? 5. Where should she start? Develop with the class a list of questions she could ask herself if she is interested in this field.	

Subject Home Ec

Grade Level ____________

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Económics Clothing	Involve students in order for them to find conclusions to circumstances.	Open end situation presenting circumstances for students to bring to conclusion. Ask students to describe now they would handle situations, or choose partners and act out each as a "minute drama." For examples, see Appendix I.	

Subject Home Ec Grade Level ____________

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Home Economics Child Care	Analyze self concepts as they affect the student's performance in a work situation.	Introduction to the careers available in the field of child development. Identify the types of jobs. Students could work in groups to compile a list of careers available in the area of child development. In order to help students explore occupational opportunities, students could investigage occupations in these types of institutions: a. nursery schools b. day-car centers c. kindergartens d. recreational programs e. hospital and therapy centers f. Head-start programs	"Tips and Topics" Texas Tech
	Evaluate tentative Career choices in ways it will contribute to the maintenance of a positive self concept.	What opportunities are available at the semi-skilled level? At the skilled level? At the professional level? How would home economics help a student interested in Vista or the Peace Corps? Discussion of the skills involved in the care of children. What personal attributes must students develop? What are they doing right now to develop these skills? (ex.-candy stripers) How are activities as these helping to develop them for a future career? Where are some places where they might help care for children? 1. Ask working mothers what their greatest satisfactions are in having two jobs? 2. Ask men in families where both parents work how much they help with the care and management of the home.	

Subject Home Ec

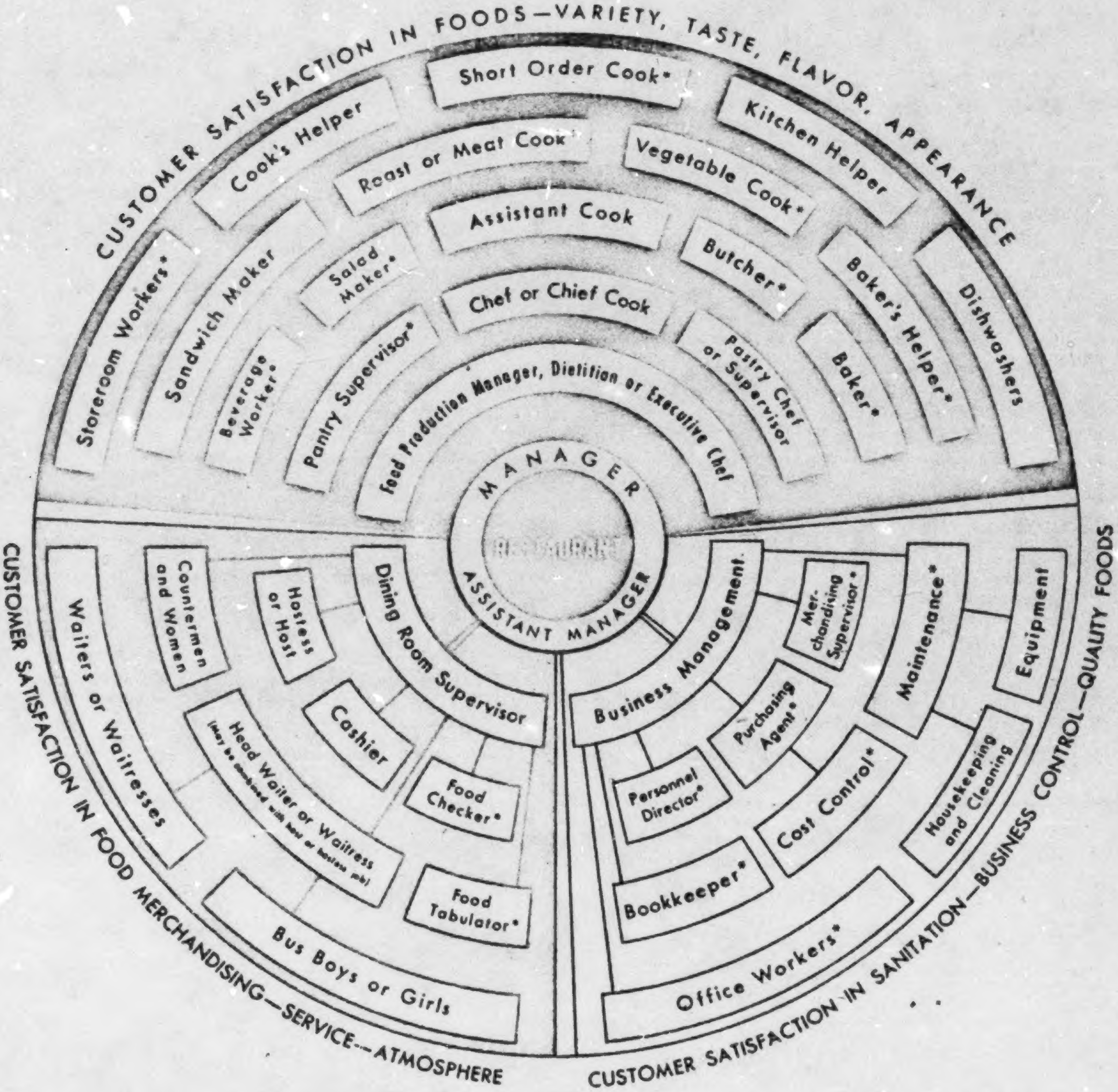
Grade Level ______

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Child Care cont.		Compile a student list of small play time activities that could also be used as a learning experience such as art activities, story times, music, and science activities. Students could prepare a bulletin board from this list, or develop it into group or individual projects where they could make some type of toy or activity that could also be a learning experience for them. (ex.-a coloring book that would teach children to count or the ABC's)	
	Determine the various types of child care services available in their community.	Make a survey of your area and find out what types of services are available for caring for children. Locate on a map of your area centers or homes where children are kept while parents work. Determine fees for these services for a day, a week, or a month. 1. Which jobs in your area are concerned only with safety and amusement of children? 2. Which child care workers are primarily concerned with the education of the child? 3. If you were employed in such service, how would your duties differ?	
	Evaluate individual contribution as it affects future career choices.	A student interested in a career in child care services will evaluate her individual contributions in this area. The student will list the home economics related tasks which would develop into a job.	

Subject Home Ec

Grade Level

RESTAURANT ORGANIZATION


CUSTOMER SATISFACTION IN FOODS—VARIETY, TASTE, FLAVOR, APPEARANCE
Short Order Cook*
Cook's Helper
Kitchen Helper
Roast or Meat Cook
Vegetable Cook*
Assistant Cook
Storeroom Workers*
Sandwich Maker
Salad Maker*
Butcher*
Baker's Helper*
Dishwashers
Chef or Chief Cook
Beverage Worker*
Pantry Supervisor*
Pastry Chef or Supervisor
Baker*
Food Production Manager, Dietition or Executive Chef
MANAGER
RESTAURANT
ASSISTANT MANAGER
Countermen and Women
Hostess or Host
Dining Room Supervisor
Waiters or Waitresses
Cashier
Head Waiter or Waitress (may be combined with host or hostess job)
Food Checker*
Food Tabulator*
Bus Boys or Girls
CUSTOMER SATISFACTION IN FOOD MERCHANDISING—SERVICE—ATMOSPHERE
Business Management
Merchandising Supervisor*
Maintenance*
Equipment
Purchasing Agent*
Personnel Director*
Cost Control*
Housekeeping and Cleaning
Bookkeeper*
Office Workers*
CUSTOMER SATISFACTION IN SANITATION—BUSINESS CONTROL—QUALITY FOODS

This chart ** shows some of the positions available in the food service field. The kinds of work represented by these job listings are done to a greater or lesser degree in practically all eating establishments. In some cases, the jobs will have different names. Sometimes one person may be responsible for a half dozen assignments that require eight to ten people in larger restaurants. This chart also illustrates the interdependence of all restaurant positions and demonstrates how the ultimate goal of each one is the pleasing of the customer.

*These jobs, found in some larger restaurants, may be handled by other workers in smaller establishments.

**From *Vocational Guidance Manual for the Food Service Industry*, National Restaurant Assoc., 1530 Lake Shore Drive, Chicago 10, Illinois. 1958.

KINDS OF RESTAURANT

FOR BEGINNERS—POSITIONS FOR WHICH YOUNG

	Bus Boy or Girl	Waiter or Waitress	Hostess	Sanitation and Maintenance
BASIC JOB DESCRIPTION (Varies in Different Restaurants)	Clears table and may reset with fresh linens and clean silver. Fills water glasses. Helps keep dining room clean. Good way to start learning restaurant business.	Takes orders and serves food and beverages to guests. Must have knowledge of particular type of service used in restaurant. Must work quickly and get order accurately. Must possess poise and self-control, and get along well with people. Good beginning experience.	Greets people who enter restaurant and escorts them to table. Usually presents menus. Must be familiar with duties of waitress. Inspects dining room for order and cleanliness. Good choice for person who meets people easily. Requires tact and pleasant personality.	Porters, dish washers, pot washers keep dishes, cooking utensils, equipment and floors clean. Modern machines simplify dish washing. Excellent way to begin and to observe kinds of kitchen jobs.
Opportunity for Advancement	Waiter or waitress Soda fountain worker Kitchen helper Sandwich maker	Hostess Headwaiter or waitress Cashier Dining room supervisor	Cashier Dining room supervisor Assistant restaurant manager	Kitchen helper Sandwich maker Beverage worker

FOR THOSE WITH TRAINING OR EXPERIENCE—POSITIONS

	Cashier	Food Checker	Chef and Cook	Pastry Chef and Baker
BASIC JOB DESCRIPTION (Varies in Different Restaurants)	Receives payment for meals either from customer or waiter or waitress. Must be accurate and fast in making change. May do some tabulating and record keeping. May handle customer complaints. Must be tactful and gracious.	In cafeteria, itemizes and totals customers' orders. In restaurant dining room may check food as it leaves kitchen and tabulate each individual order or portion of food.	Prepares and portions meat, vegetables, sauces, casserole dishes. In large restaurants one may find individual roast or dinner cooks, cold meat cooks, vegetable cooks, sauce cooks, short order cooks, soup cooks.	Bakes cakes, cookies, pies and other pastry type desserts. Bakes bread, rolls, quick breads. Must plan so fresh breads will be ready as needed. In some restaurants skill in cake decorating is required.
Opportunity for Advancement	Bookkeeper Accountant	Cashier Storeroom control supervisor Purchasing agent	Vegetable cook to fry cook to soup cook to sauce cook to roast cook to chef.	Baker to pastry cook to pastry chef.

FOR THOSE WITH MORE TRAINING AND EXPERIENCE—MANAGEMENT AND OTHER

	Restaurant Manager	Assistant Manager	Food Production Manager	Chain Executive
BASIC JOB DESCRIPTION (Varies in Different Restaurants)	Coordinates entire operation of restaurant for efficient, courteous food service. May deal with supervisory staff or in smaller organization work with kitchen and dining room personnel directly. Should be familiar with all jobs in restaurant.	An understudy to manager. Usually assumes responsibility for over-all operation and also has certain areas of specific responsibility. Takes over completely when manager is not present.	Has charge of all food preparation. Must have knowledge of food preparation and appreciation of good food standards. Must be proficient in cost control. Supervises kitchen staff so must know how to work with and direct people.	Position found in large chain-type operations. Largely administrative work and usually does not involve work directly in contact with food preparation and service although thorough knowledge of food service is needed.
Opportunity for Advancement	Chain restaurant supervisor Restaurant owner	Restaurant manager Chain restaurant manager Restaurant owner	Assistant manager Restaurant manager Restaurant owner	Restaurant owner

APPENDIX C

QUESTIONS?

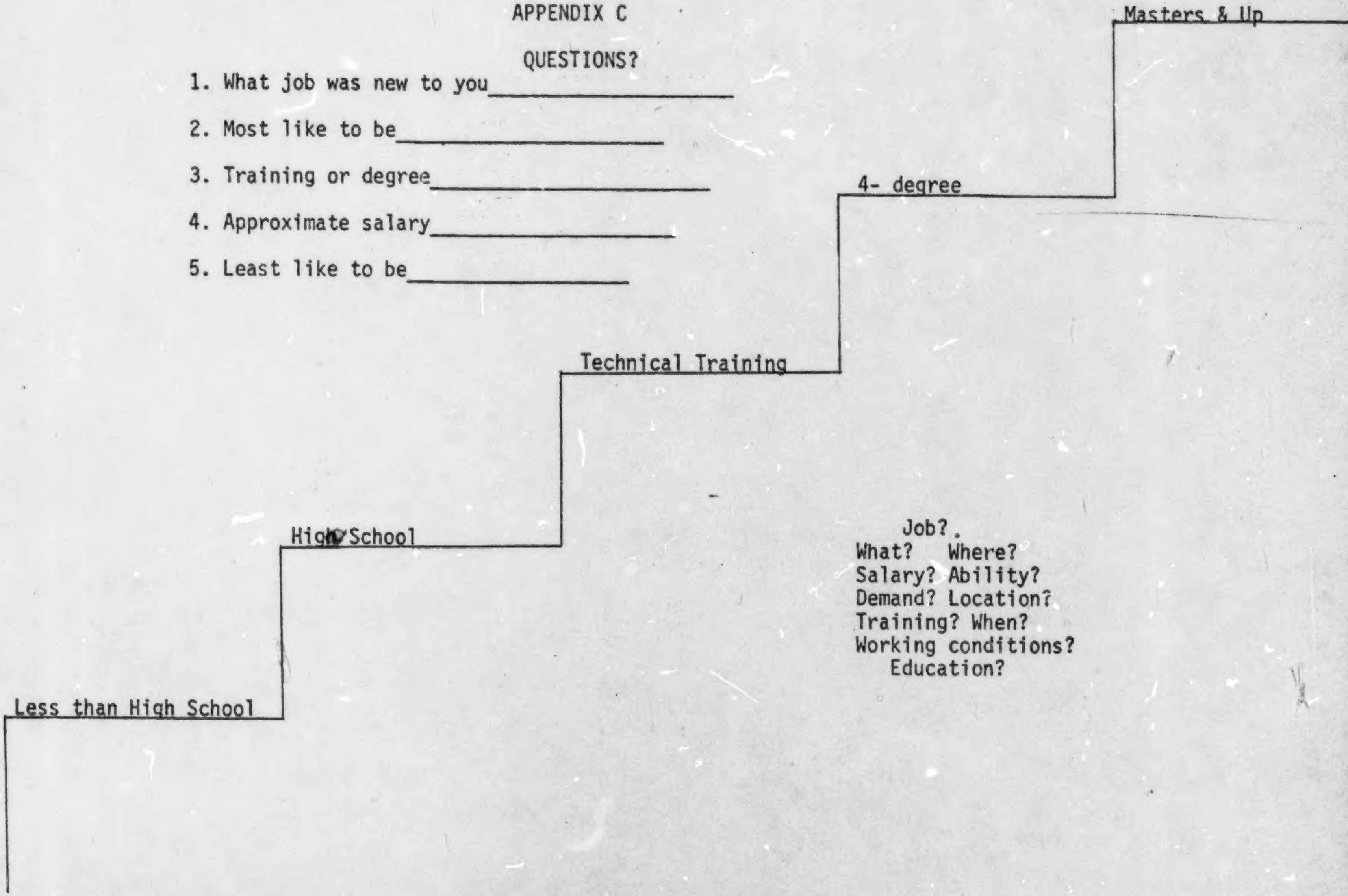
1. What job was new to you____________________

2. Most like to be______________________

3. Training or degree_______________________

4. Approximate salary____________________

5. Least like to be__________________


Masters & Up
4- degree
Technical Training
High School
Less than High School

Job?
What? Where?
Salary? Ability?
Demand? Location?
Training? When?
Working conditions?
Education?

APPENDIX C

JOB OPPORTUNITIES IN CLOTHING

Less than High School

Stock clerk
clerk-fashions
laundry worker
garment cutter

High School

display artist
dressmaker
clothing alterations

Technical Training

fashion model
window decorator
custom drapery maker
fashion illustrator
fashion photographer
charm school instructor
sewing machine co. inspector
apparel ship manager

4- degree

home examiner expert
clothing teacher
consultant-home furnishings
journalist
fashion designer
buyer
merchandiser

Masters

fibers promotion specialist
Instructor-college
Dept. head-college

APPENDIX D

Guest Speaker

Answer questions 1-3 before speaker, questions 4-8 as evaluation:

1. Occupation of speaker:____

2. Purpose of inviting speaker:____________________________________

3. Questions I want answered:_____________________________________

____

____

****

4. Did the speaker use words that you could understand?__________

5. Was the subject interesting?__________

6. List some facts you learned from the visit:_______________________

____

7. The most valuable, worthwhile feature of the speech was:____________

8. What ideas did the speaker bring out to change your way of thinking about a career in this line of work?____

____

____

9. How could this lesson be improved?______________________________

____

APPENDIX E

Field Trip Report

Name______________________

Date______________________

Fill in 1-5 before trip, 6-8 after trip:

1. Place to be visited:______________________________

2. Purpose of trip:____

3. Occupations I plan to observe:____

4. Observations to look for:____

____

5. The questions I want answered:____

____

****

6. Summarize the trip:____

____

____

7. The most worthwhile feature of the trip was:______________________________________

8. Suggestions for improving future trips:____

____

APPENDIX I

Open End Situations:

1. Mary Buxton is a senior. She is shopping for a dress to wear for graduation and later for job interviews. Mary can spend around $45 for the dress and another $20 for shoes.

Miss Sadler sells dresses in the fasion department. She gets a 2% commission on her sales.

Mary has tried on five dresses in the fashion department. Miss Sadler has been helping her for about one half hour. Mary is beginning to feel guilty for taking so much time. Miss Sadler is begoming impatient and wants to sell a dress--any dress. She tells Mary the dress she has on is "made for her". The dress costs $55. It is purple with sequins at the neck. Mary looks sick in purple and the sequins make the dress unsuitable for many places she wants to wear it.

At this point Mary can buy the dress to make Miss Sadler happy and then return it later...ask to see more dresses...sneak out when Miss Sadler isn't looking...tell Miss Sadler shw wants to think about it and may be back later. What else can Mary do? What would you do?

At this point Miss Sadler can leave and wait on someone else...bring more dresses for Mary...suggest that Mary think it over and come back another day... tell Mary to stop wasting her time. What else can she do? What would you do?

---

2. Mrs. Kelly received a knit suit as a Christmas present for her one-year-old son. Two months later she started to put it on him for the first time and noticed that the suit could only be dry cleaned and not washed. Mrs. Kelly preferred washable clothes for the baby, so she took the suit back to the store for a refund or exchange.

Mrs. Bartley worked in the infant's department and waited on Mrs. Kelly when she brought the suit back. A month earlier these same suits had been marked half price for clearance--all were sold. Mrs. Bartley was responsible for clearing out old merchandise and the store was already selling spring clothes. Mrs. Bartley didn't want a winter suit in stock so she refused to take back the suit. What would you have done if you were Mrs. Kelly? If you were Mrs. Bartley? How might the problem have been avoided? What would be the best solution now?

Home Economics
Selected References

Printed Material:

"A Guide for Foods and Nutrition," College of Home Economics, Athens, Georgia

"Career for Youth in Food Service Industry," National Restaurant Association

"Curriculum Guide for Family and Child Development," Georgia Dept. of Education

"Food Service Occupations," University of Texas

"Home Economics Related Occupations," Interstate Printers and Publishers, Inc.

"References and Aids in the Teaching of Home Economics and Related Occupations," Dept. of Education, New Jersey

"Suggested Teaching Approaches for Career Development in the Curriculum," University of Minnesota

"Tips and Topics," Texas Tech University

"World of Work Project," North Dakota

Filmstrips:

"Jobs for You," Guidance Associates

"Marriage and Career," Popular Science Publication Co.

"The Unwanted Four," National Restaurant Association

Films:

"New Horizons in Food Service Careers," National Restaurant Association

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

INDUSTRIAL ARTS

Grade 8

Prepared by

Daryl Miller
&
Jerry Molstad

INDUSTRIAL ARTS

In Industrial Arts the students work in the various areas including Woodworking, Metals, Drafting, and Electricity. In most of these areas they work on individual projects or experiments in electricity. In working on their projects, they work with drawings that they have made. These drawings are similar to those used by all types of industry. The skills that they acquire in constructing projects can be related to almost any occupation or career.

The Industrial Arts laboratory itself is arranged similar to most industry. Ithas travel lanes or safety zones and danger zones around the machines much like in industry.

The following material can be used for career awareness in eighth grade Industrial Arts. It contains information and materials that can be used in your present curriculum. It is suggested that two to three days be alloted in each area. However, the activities are only suggested and the teacher should choose only those activities or materials which they think will fit their needs.

OBJECTIVES

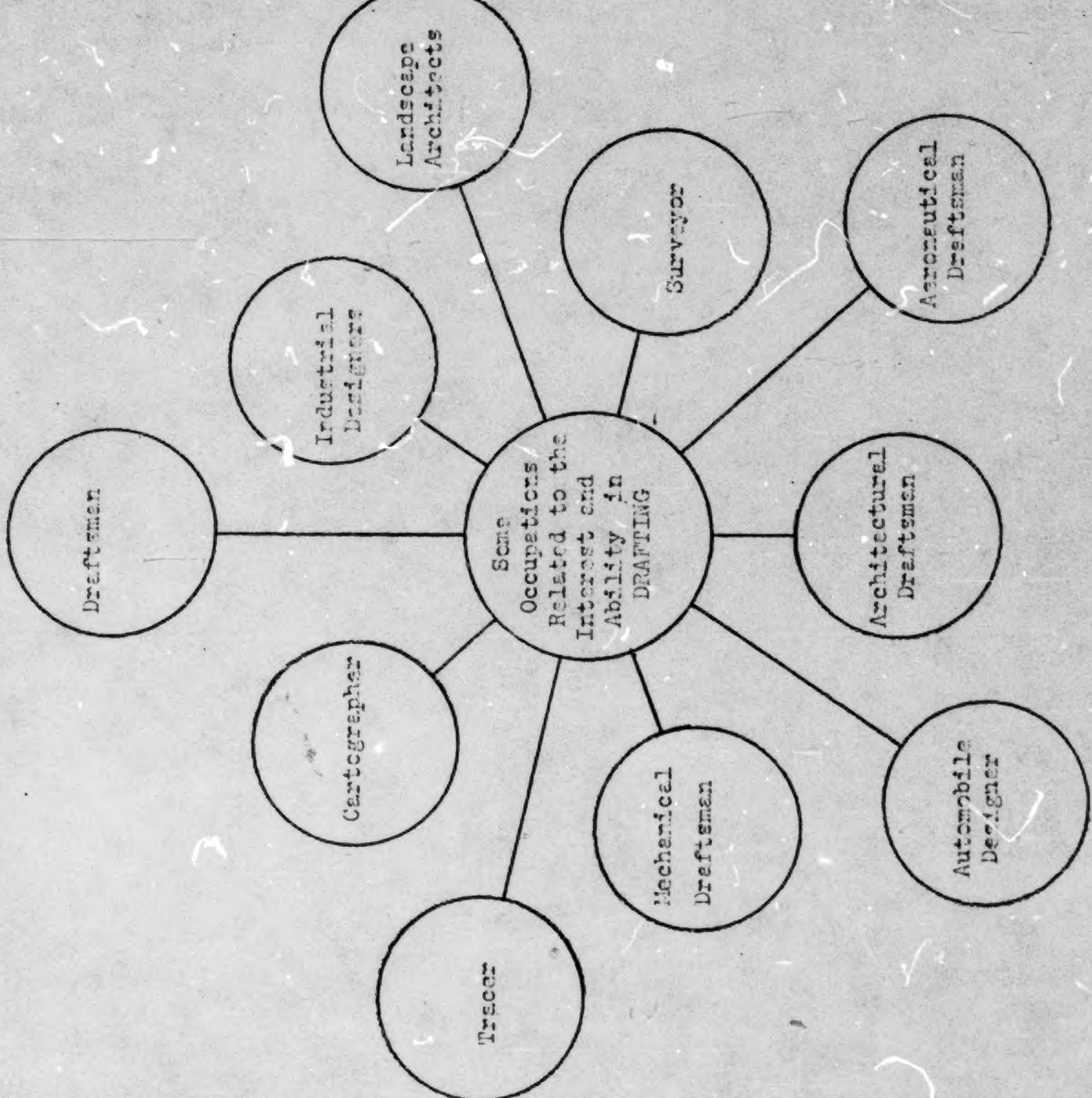
A. Develop an insight and an understanding of industry and it's place in in our culture.

B. Discover and develop talents, aptitudes, interests, and potentials of individuals for technical pursuits and applied sciences.

C. Develop an understanding of industrial processes and the practical application of specific principles.

D. Develop basic skills in the proper use of common industrial tools, machines, and processes.

E. Develop problem-solving and creative abilities involving the materials, processes, and products of industry.


Some Occupations Related to the Interest and Ability in DRAFTING
Draftsman
Industrial Designers
Landscape Architects
Surveyor
Aeronautical Draftsman
Architectural Draftsman
Automobile Designer
Mechanical Draftsman
Tracer
Cartographer

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Drafting	The student will compare and contrast the basic education requirements of several career areas in the field of drafting. The student will explore a wide range of careers as they reflect his interest and abilities.	Discuss the many related occupations in the area of drafting 1. Draftsman 2. Industrial Designers 3. Landscape Architects 4. Surveyor 5. Aeronautical Draftsman 6. Architectural Draftsman 7. Automobile Designer 8. Mechanical Draftsman 9. Tracer 10. Cartographer	Occupational Outlook Handbook Industrial Careers Kit Largo, Florida Science and Engineering Kit, Largo, Florida D.O.T. IACP - World of Construction, and World of Manufacturing, McKnight Pub. Co.
	The student will determine the skills needed for a variety of occupations.	Have the students try and find help wanted ads that would relate to the occupations in the field of drafting.	For further information about these occupations see related APPENDIX A Local newspaper
		Exploratory trip to the local high school or vocational school to visit a drafting class.	Local high school or vocational school
		Interview with a person who is employed in this field and fill out the job analysis sheet about this persons' job and responsibilities	See APPENDIX A-1 for job analysis sheet

Subject Industrial Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Drafting cont.		Field trips to any of the local industries that are connected with the occupation of drafting. Have the students prepare questions for the guest speaker to answer about his particular occupation. Have students prepare related information on job opportunities and place on the bulletin board.	Local architectural firms Outside speaker "Whats So Special About Paper", Modern Films "People Who Make Things" Guidance Associates (Whittier) "Model Builders" Guidance Associates (Whittier) The Nations Builders "Architectural Drafting" Bowmar, (Whittier)

Subject Industrial Arts

Grade Level 8th

APPENDIX A

CAREERS IN THE DRAFTING INDUSTRY

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Draftsman	Translate the ideas, rough sketches, specifications, and calculations of engineers, architects, and designers into working plans which are used in making a product.	Technical institutes, vocational and technical high school, OJT, or 3 or 4 years apprenticeship.	Expected to be favorable through the 70's	Average $700 to $850 per month
Industrial Designer	Combine technical knowledge of material, machines, and methods of production with artistic talent to imporve the appearance and functional design of machine-made products.	College degree or 5 years of study.	Expand moderately thru the 70's.	$8000 to $25000 annually
Landscape Architect	Plan, design, and supervise the arrangement of outdoor areas for people to use and enjoy	Bachelors degree	Expected to be favorable through the 70's	$7000 to $25000 annually
Surveyor	Provides information on measurements and physical characteristics of construction sites	OJT (extensive) Post High	Expected good thru 70s	$8000 $12000
Aeronautical Draftsman	Translates the ideas and calculations into complete and accurate working plans which are used in the aircraft industry.	2 yrs. of college for drafting	Long range outlook is good	$2.65 to $5.00 per hour
Architectural Draftsman	Prepares detailed drawings of architectural and structural features in all types of buildings and structures	2 yrs. of technical training	Expected to be favorable thru the mid 70's	$375 to $1000 per month

APPENDIX A cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Automotive Designer	Originate design ideas and to prepare various drawings, sketches, and color renderings for automotive styling	Some college training or formal art training	Competition for jobs is very keen	$8500 to $12000 annually
Mechanical Draftsman	Makes preliminary sketches of proposed objects and mechanical devices, adding the necessary details.	2 years technical training	Favorable thru the 70s	$8500 to $12000 annually
Tracer	Duplicates plans and drawings of all types which have been prepared by a draftsman.	High school diploma with some training in drafting, art, or mechanical drawing	Favorable thru 70's	$300 to $550 per month
Cartographer	Works at one or more phases of map making.	College degree	A job which will never finish	$6000 to $15000 annually

APPENDIX A-1

JOB ANALYSIS SHEET

Name of person ______________ Job Title _____________ Name of Company __________________

1. How many years have you been employed in this field?

2. What are some of the daily tasks that you perform?

3. Tell me about your working conditions, chances for advancement, and other advantages of your job.

4. Is your work dangerous? If so, what precautions are taken to avoid injury?

5. Would you advise young people to prepare for this kind of work? Why?

6. Put other questions and answers that interest you below.

APPENDIX A-2

BUSINESSES AND OCCUPATIONS IN THE SIOUX FALLS AREA THAT RELATE TO DRAFTING

Fritzel Kroeger Griffin and Berg
118 S. Main
ph. 336-3265

Spitznagel Partners Inc.
1112 N. West
ph. 336-1160

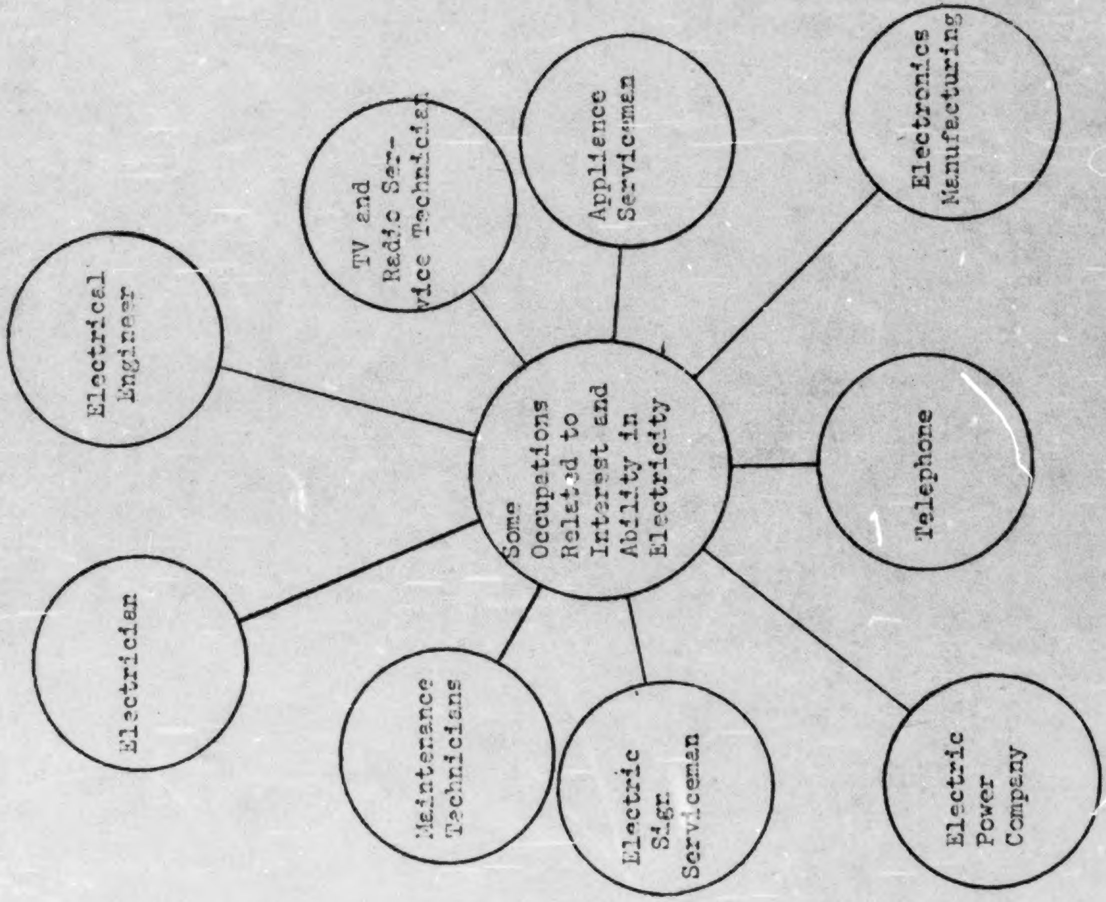
Whitwam and Associates, Architects
600 West Ave. N.
ph. 336-3708

Mathison Drafting Supply Inc.
115 S. Indiana
ph. 336-2437

Larson Designs
1608 S. Western
ph. 336-6037

Sayre RF and Associates
1400 S. Van Eps
ph. 336-8140

Schmitz and Kalda
260 Boyce-Greeley Bldg.
ph. 332-8241


Some Occupations Related to Interest and Ability in Electricity
Electrical Engineer
TV and Radio Ser-vice Technicia
Applience Serviceman
Electronics Manufacturing
Telephone
Electric Power Company
Electric Sign Serviceman
Maintenance Technicians
Electrician

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Electricity	The student will compare and contrast the basic education requirements of several career areas in the field of electricity. The student will explore a wide range of careers as they reflect his interests and abilities. The student will determine the skills needed for a variety of occupations.	Discuss the many related occupations in the field of electricity. 1. Electrical Engineer 2. Electrician 3. TV and Radio Service Technicians 4. Maintenance Electricians 5. Appliance Serviceman 6. Electric Sign Serviceman 7. Electronics Manufacturing 8. Electric Power Company a. Power Plant Occupations b. Transmission and Distribution c. Consumer Services 9. Telephone a. Telephone Craftsman b. Central Office Craftsman c. Central Office Equipment Installer	Occupational Outlook Handbook Industrial Careers Kit Largo, Florida "Industrial Education" March, 1973 "School Shop" April, 1973 D.O.T. IACP World of Construction and World of Manufacturing, McKnight Pub. Co. For further information about these occupations see the related APPENDIX B
		Have the students get help wanted ads from the newspaper that would relate to the subject area.	Local newspaper
		Exploratory trip to the local high school or vocational school to see an electronics or advanced electricity class in progress.	Local high school or vocational school

Subject Industrial Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Electricity cont.		Interview with a person who is employed in the field and fill out job analysis sheet.	See APPENDIX B-1 for job analysis sheet
		Field trip to any of the local industries that deal in the occupations with electricity.	Local electrical manufacturing companies or related businesses
		Invite electrician to speak to class on the skills needed for his career.	Outside speaker such as electrician or person with related occupation
		Have students prepare related information on job opportunities and place on the bulletin board.	The Nation's Builders "Electricity" Filmstrip (Area School - IML)
			The Age of Electronics "Overview", "Electronic Technicians", "Electro Mechanical Assemblers" Filmstrip, (Area School - IML)
			Jobs For The Now Generation "Electronic Engineering Technician Assistant", Filmstrip, (Area School - IML)

Subject Industrial Arts

Grade Level 8th

APPENDIX B

CAREERS IN THE ELECTRICITY INDUSTRY

OCCUPATIONS	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Electrical Engineer	Design, develop and supervise manufacturing of electrical equipment, usually specialized.	Baccalaureate degree required	Increase rapidly through the 70's	$6.20 to $6.85 per hour
Electrician	Lay out, assemble, install and test electrical fixtures and wiring used in electricity systems - Construction Electricians install and connect electrical machinery, electronic equipment, controls and signal and control equipment.	Recommend 4 year apprenticeship; unions have developed extensive training programs in high school. Prerequisite; courses in math and physics desirable, must take test for aptitude.	Increase very rapidly thru the 70's because of large expansion in construction activity.	$6.20 to $6.85 per hour
TV and Radio Service Technicians	Install and repair TV sets, radios, and other electronic products, usually specialized.	2 to 4 years combined training and on the job training.	Increase rapidly thru the 70's	$3.50 to $6.50 per hour
Maintenance Electricians	Maintain and repair many differentkinds of electrical equipment, modify and install motors, transformers, instruments and lighting systems used in industry, commercial and public buildings.	High school diploma, w/math basic science, OJT, or 4 yrs. apprenticeship.	Increase moderately thru the 70's. Will grow because of the growing volume of electronic equipment now in use.	$3.07 to $5.29 per hour

APPENDIX B cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Appliance Serviceman	Repair and service all manner of applicances ranging from small to large, such as toasters and irons to refrigerators and automatic wahsers. Uses special tools such as ammeters, ohm meters, volt meters, as well as other gauges and instruments.	OJT w/high school diploma. Special courses by correspondence or voc-tech school usually takes 3yrs. Should have mechanical apt.	To grow rapidly thru the 70's	$3.00 to $5.30 per hour
Electric Sign Repairman	Diagnose, maintain, and repair electric signs.	3 years of OJT	Increase rapidly thru the 70's	$2.50 to $6.44/hr.
Electronics Manufacturing	4 major catagories: a. Government Products b. Industrial Products c. Consumer Products d. Components Products	3 to 5 years apprenticeship usually need a college degree (some with advanced degrees) small number without degrees	Increase rapidly thru the 70's	Varies with product that is produced
Electric Power Co. A. Plant	Observe, control and keep the records of the operation of various kinds of equipment.	High school education	Little change thru the 70's	$4.14 to $5.54 per hour
B. Trans. & Dist.	Control the flow of electricity a. load dispatcher b. lineman c. troublemen d. groundman e. cable splicers	3 to 7 years OJT	Some increase in the 70's	$3.50 to $5.74 per hour

APPENDIX B cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
C. Consumer Service	Install, test, and repair meters and those who read meters.	4 years of OJT	Little change in the 70's	$3.83 to $5.18 per hour
Telephone Co. A. Craftsman	Engaged in construction, installation and maintenance activities necessary to operate the mechanical electrical and electronic equipment in our communications systems.	High school diploma or vocational school educ.	Increase rapidly during the 70's	$3.46 to $4.38 per hour
B. Central Office Craftsman	Test, maintain, and repair mechanical, electrical and electronic switching equipment.	Same as above	Same as above	Same as above
C. Central Office Equip. Inst.	Assemble, wire, adjust, and test complex switching and dialing equipment in central offices of telephone co.	Same as above	Same as above	$2.50 to $4.82 per hour

APPENDIX B-1

JOB ANALYSIS SHEET

Name of person ________________ Job Title ________________ Name of Company ________________

1. How many years have you been employed in this field?
2. What are some of the daily tasks that you perform?
3. Tell me about your working conditions, chances for advancement, and other advantages of your job.
4. Is your work dangerous? If so, what precautions are taken to avoid injury?
5. Would you advise young people to prepare for this kind of work? Why?
6. Put other questions and answers that interest you below.

APPENDIX B-2

BUSINESSES AND OCCUPATIONS IN THE SIOUX FALLS AREA THAT RELATE TO ELECTRICITY

KISD Radio
130 N. Main
ph. 336-1230

KSOO Radio & TV
6th and Dakota
ph. 336-1300

Raven Industries Inc.
205 E. 6th
ph. 336-2750

Clocks - Repairing
1301 S. Duluth
ph. 332-9662

Electric Motor Repair
927 E. 8th
ph. 336-3020

Shakstad Electric Machine Works
1400 Industrial Ave.
ph. 335-3090

NSP
315 S. Phillips
ph. 336-2700

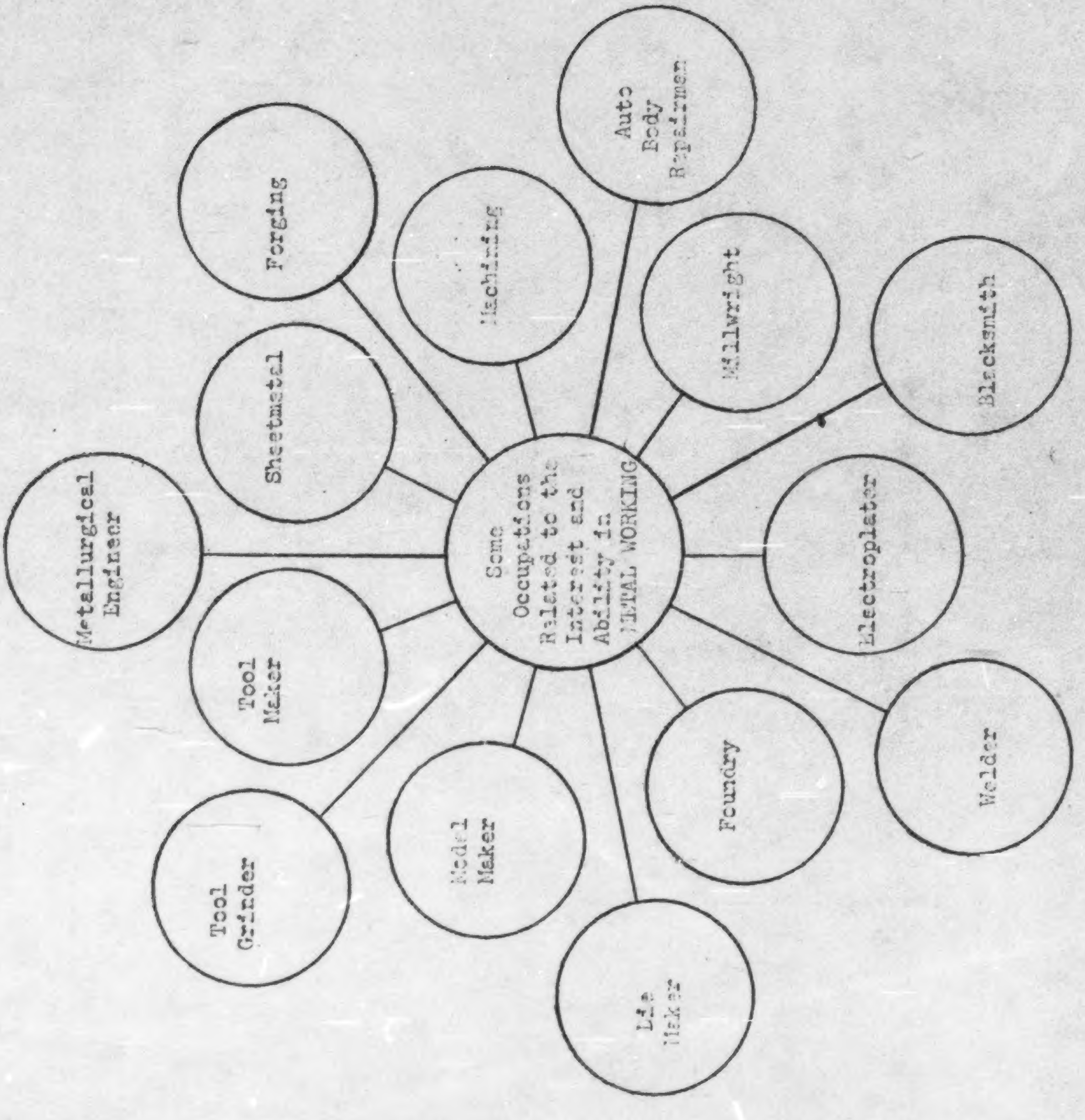
G.E. Appliance and TV
323 S. Phillips
336-1785

Dakota Electric
3204 S. Walts
ph. 339-0075

Elton Electric
2013 1/2 S. Minnesota
ph. 336-2644

Donavan Construction Co.
1100 S. Cliff Ave.
ph. 334-2641

Loveland, Jack LPE
1700 W. 22nd
ph. 339-4272


Some Occupations Related to the Interest and Ability in METAL WORKING
Metallurgical Engineer
Sheetmetal
Forging
Machining
Auto Body Repairmen
Millwright
Blacksmith
Electroplater
Welder
Foundry
Die Maker
Model Maker
Tool Grinder
Tool Maker

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Metals	The students will compare and contrast the basic education requirements of several areas in the field of metals. The student will explore a wide range of careers as they reflect his interests and abilities. The student will determine the skills needed for a variety of occupations in the metals field.	The student will read and fill out a work sheet on the comic book Popeye and Manufacturing Careers. Discuss the many related occupations in the area of metals. 1. Metallurgical Engineer 2. Sheetmetal Worker 3. Structural-Ornamental and Reinforcing Iron Workers, Riggers, and Machine Movers 4. Forge Shop 5. Machining 6. Auto Body Repairman 7. Millwright 8. Blacksmith 9. Electroplater 10. Welders and Oxygen and arch cutters 11. Aluminum Industry 12. Foundry a. Patternmakers b. Molders c. Coremakers 13. Iron and Steel Industry 14. Die Maker	See APPENDIX C-1 for work sheet Popeye and Manufacturing Careers, King Features (Whittier) Occupational Outlook Handbook (Whittier) Science and Engineering Kit, Largo (Whittier) Industrial Career Kit Largo, (Whittier) D.O.T. IACP World of Construction and World of Manufacturing, McKnight, (Whittier) For further information on the careers listed in the activities column see APPENDIX C

Subject Industrial Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Metals cont.		15. Model Maker 16. Tool Grinder 17. Tool Maker	
		Have the students try and find help wanted ads that would relate to the occupations in the field of metals.	Local newspaper
		Exploratory trip to the local high school or vocational school to visit a metals class in progress,	Local high school or vocational school
		Interview with a person sho is employed in this field and fill out the job analysis sheet about this persons' job.	See APPENDIX C-2 for job analysis sheet
		Field trips to any of the local industries that are connected with the occupation of metals.	Local industries
		Have the students try and figure out the annual income of an occupation in the metals area that they think they would like to do.	See APPENDIX C
			Filmstrip: "People Who Make Things", Guidance Associates, (Whittier)

Subject Industrial Arts

Grade Level 8th

APPENDIX C

CAREERS IN THE METAL INDUSTRY

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
METALLURGICAL ENGINEER	Develop methods of processing and converting metals into useful porducts.	Bachelors degree	Grow rapidly during the 70's	$8510 to $16000 annually
SHEETMETAL WORKER	Engage in construction related work, fabricate and install ducts used in ventilation, air conditioning and heating.	4 years apprenticeship	Increase rapidly during the 70's	$5.85 to $7.35 per hour
STRUCTURAL-ORNAMENTAL & REINFORCING IRON WKRS., RIGGERS	Erect assemble, or install fabricated metal products.	3 years apprenticeship	Increase rapidly during the 70's	$4.87 to $7.95 per hour
FORGE SHOP	Methods of working and shaping metals.	OJT and work experience	Increase slowly thru the 70's	$3.36 to $4.31 per. h
MACHINING	Operate machine tools	Apprenticeship and a period of formal OJT	Thousands of jobs opening thru 70's	$2.89 to $5.29 per hour
AUTO BODY	Repair damaged automobiles	3 to 4 years OJT	Moderate increase during the 70's	$3.83 to $7.67 per hr
MILLWRIGHT	Skilled craftsman who moves and installs lathes, milling machine automatic assembly equipment, and other types of heavy industrial machinery.	4 years of apprenticeship	Moderate increase during the 70's	$3.41 to $4.75 per hour

APPENDIX C cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Blacksmith	Makes and repairs various metal articles such as machines and agricultural implement parts.	3 to 4 yrs. apprenticeship	Decline slowly thru the 70's	$3.33 to $5.12 per hour
Electroplater	Use plating solution and electric current to coat metal with a protective surface for a more attractive apprerance.	Same as above	Increase moderately thru the 70's	$2.00 to $4.50 per hour
Welders and Oxygen and Arc Cutters	Joining pieces of metal by applying heat and pressure to form a permanent bond. Also cutting and trimming metal objects.	OJT at a vocational school, Apprenticeship varies	Increase rapidly thru the 70's	$2.81 to $4.45 per hour
Aluminum Industry	Concentrated mainly in the rolling and extruding sector.	College degree to 3-4 years apprenticeship	Rise moderately thru the 70's	$3.09 to $4.45 per hour
Foundry Patternmaker Molder Coremakers	Method of forming metal into intricate shapes.	4 to 5 years OJT	Little or no change thru the 70's	$3.25 to $4.50 per hour
Iron & Steel Industry	Broad range of jobs requiring a wide range of skills from unskilled to technical and professional jobs.	H.S. diploma, OJT, Apprenticeship, college degree	Decline slowly thru the 70's	$3.36 to $4.75 per hour
Die Maker	Makes, repairs and maintains dies used in shaping metal.	4 years apprenticeship	Always in demand.	$2.60 to $3.65 per hour

APPENDIX C cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Model Maker	Skilled worker with artistic and technical ability who constructs full-size or scale models of objects or parts. Must be patient.	4 yr. apprenticeship or OJT	Should be good	$3.50 to $6.00 per hour
Tool Grinder	Sharpens cutting edges of tools used in metalworking machines.	Formal apprenticeship and OJT	Should be favorable for the 70's	$2.00 to $5.00 per hour
Tool Maker	Makes, repairs, and maintains cutting tools used in metalworking machines.	4 to 5 years apprenticeship	Good thru the 70's	$3.00 to $4.50 per hour

APPENDIX C-1

Worksheet for "POPEYE AND MANUFACTURING CAREERS"

1. There are about ________________ men and women who work in the field of manufacturing.
2. More than ________________ of these people are semi-skilled.
3. About ________________ of the total are foreman and craftsmen.
4. List 13 occupations in manufacturing and a brief description of each.
    1.
    2.
    3.
    4.
    5.
    6.
    7.
    8.
    9.
    10.
    11.
    12.
    13.

JOB ANALYSIS SHEET

Name of Person ______________ Job Title ______________ Name of Company ________________

1. How many years have you been employed in this field?
2. What are some of the daily tasks that you perform?
3. Tell me about your working conditions, chances for advancement, and other advantages of your job.
4. Is your work dangerous? If so, what precautions are taken to avoid injury?
5. Would you advise young people to prepare for this kind of work? Yes?
6. Put other questions and answers that interest you below.

APPENDIX C-3

BUSINESSES AND OCCUPATIONS IN THE SIOUX FALLS AREA THAT RELATE TO METALS

Tessier Sheet Metal Works Inc.
221 S. Jessica
ph. 336-3175

Pierres Body Shop
1304 S. Cliff Ave.
ph. 339-1804

Automotive Machine Inc.
629 N. Main
ph. 336-3758

Egger Steel Co.
909 S. 7th Ave.
ph. 336-2490

Hassenstein Steel Co.
300 W. Walnut
ph. 336-2830

Sioux Steel Co.
196 1/2 E. 6th
ph. 336-1750

Dakota Casket Co.
200 E. 6th
ph. 336-2300

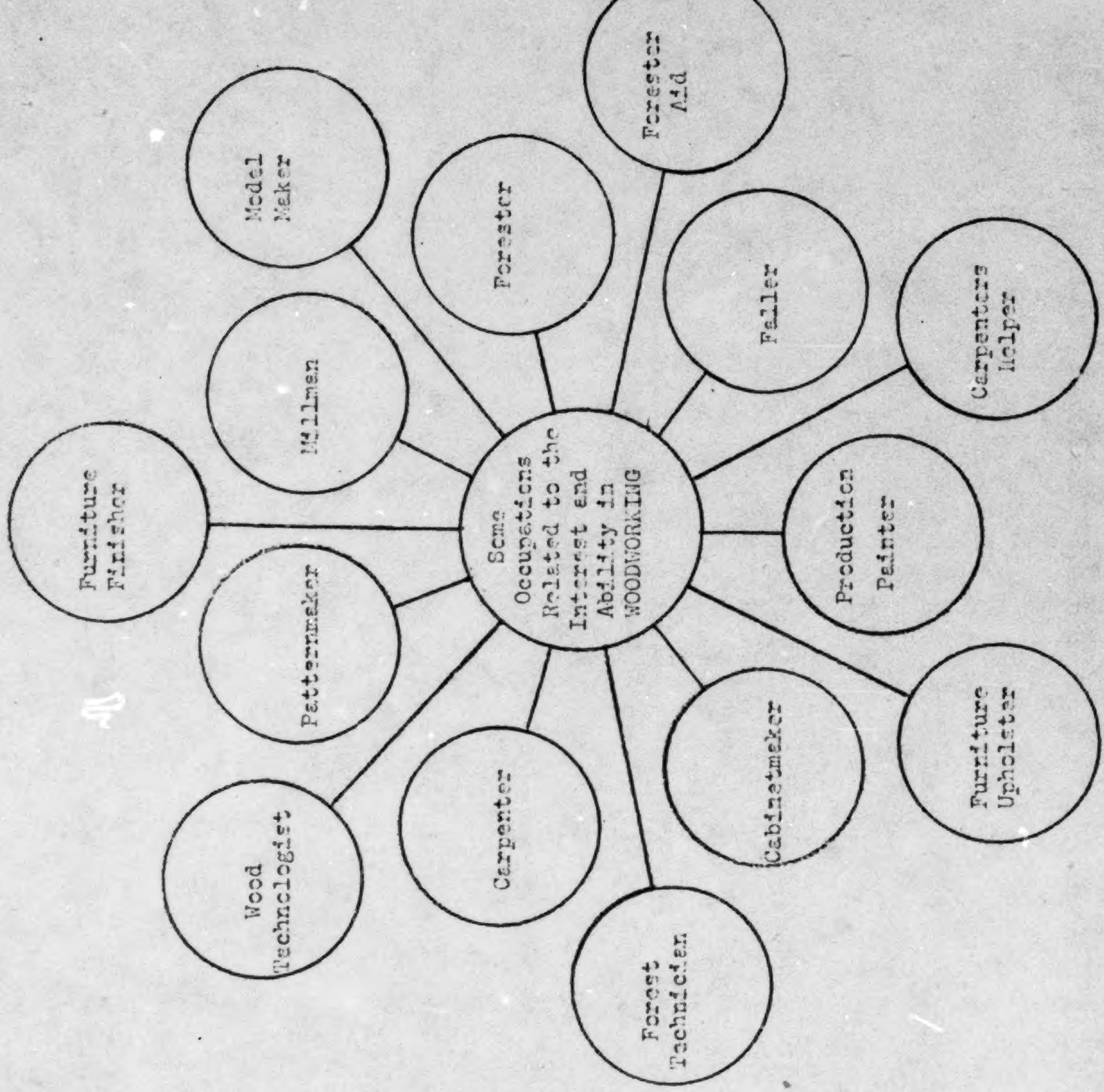
Dakota Iron - DAKON
433 N. Main
ph. 336-0526

Pitts Inc.
625 N. Phillips
ph. 336-2310

Zabel, Louis and Co.
421 E. 10th
ph. 332-7231

AlcoSheet Metal
722 E. 8th
ph. 338-0140

Overlay Welding
1720 Southeast Dr.
ph. 336-3371


Some Occupations Related to the Interest and Ability in WOODWORKING
Furniture Finisher
Millman
Model Maker
Forester
Forester Aid
Faller
Carpenters Helper
Production Painter
Furniture Upholster
Cabinetmaker
Forest Technician
Carpenter
Wood Technologist
Patternmaker

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Woodworking	The student will cite the advantages and disadvantages of a variety of careers in terms of his interests and abilities.	Have the students read Popeye and Construction Careers and fill out a work sheet. This activity could be backed up with the film "Careers-Construction"	See APPENDIX D-1 Popeye and Construction Careers, King Features (Whittier)
	The student will participate in a variety of work experiences in broad occupational areas and analyze these experiences in terms of a future career. Through field trips, reading, and discussions the student will explore occupations that would stem from the areas of woodworking.	Discuss the many related occupations in the area of woodworking, including: 1. Foresters 2. Forestry Aids 3. Carpenters 4. Carpenter Helper 5. Furniture Upholster 6. Production Painters 7. Cabinetmaker 8. Faller 9. Millman 10. Furniture Finisher 11. Model Maker 12. Pattern Maker 13. Forest Technician 14. Wood Technologist	Film: "Careers-Construction" 16mm, (AreaSchool - IML) Occupational Outlook Handbook Industrial Careers Kit Largo, (Whittier) Science and Engineering Kit, Largo, (Whittier) D.O.T. IACP - World of Construction and World of Manufacturing, McKnight (Whittier)

Subject Industrial Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Woodworking cont.			For further information on the previously listed occupations, see APPENDIX D
		Have the students try and find help wanted ads that would relate to the occupations in the field of woodworking.	Local newspapers
		Exploratory trip to the local high school or vocational school to visit a woodworking class and visit with the instructor about pre-requisites.	Local high school or vocational school
		Field trips to any of the local establishments that are connected with the occupations in woodworking.	Local building firms or contractors
		Have the students prepare questions for the guest speaker to answer about his particular occupation.	Outside speaker
			Film: "Opportunities in Logging" 16mm, Georgia-Pacific
			Filmstrip: The Nation's Builders "Overview", "Carpenters" (Area School - IML)

Subject Industrial Arts

Grade Level 8th

APPENDIX D

CAREERS IN THE WOOD INDUSTRY

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Forester	Manage, develop, and protect the forests and their resources	4 - year college degree	Increase moderately thru the 70's	$6548 to $14192/yr.
Forestry Aids	Assist foresters in managing and caring for forest lands and their resources.	1 or 2 years post secondary school training	Increase rapidly thru the 70's	$4500 to $10000/yr.
Carpenters	Erect wood frames for housing or other buildings, and do finish work in buildings.	Most training authorities recommend 4 yrs apprenticeship	Same as above	$4.45 to $8.10/hr.
Furniture Upholsterer	Reconditions and upholsters	3 yrs OJT	Little or no change	$1.60 to $5.25/hr.
Production Painter	Coats wood or metal by spraying or brushing.	2 weeks to several months	Increase slowly thru the 70's	$2.05 to $4.10/hr.
Cabinet maker	Highest skilled or the woodworking crafts.	4 yrs. apprenticeship	Expected to be steady into the 70's	$2.50 to $4.75/hr.

APPENDIX D cont.

OCCUPATION	NATURE OF WORK	EDUCATION AND TRAINING	EMPLOYMENT OUTLOOK	SALARY
Carpenters Helper	Assists a journeyman carpenter.	H.S. diploma	Remain steady	50-80% car. wage
Faller	Fells, trims, and cuts up tress	H.S. diploma	Favorable opportunities in the 70's	$200 to $800/mo.
Furniture Finisher	Finishes new or refinishes old furniture.	4 years apprenticeship	Remain moderate thru the 70's	$95 to $200/wk.
Millman	Sets up, adjusts, and operates all types of woodworking machines	Informal OJT	Should be good thru the 70's	$2.25 to $5.50/hr.
Model Maker	Construct full-size or scale models of objects and parts.	4 years apprenticeship	Increase slowly thru the 70's	$3.50 to $6.00/hr.
Patternmaker	Shapes models or patterns of all kinds of objects in woods	5 years apprenticeship	Increase slowly thru the 70's	$3.60 to $5.00/hr.
Forest Technician	Liaisons between professional foresters and skilled forest workers.	Associate degree in forest technology	Very favorable thru the 70's	$6544 to $13000/yr.
Wood Technologist	Materials specialist trained for research processing or utilization of products obtained from the forest.	Bachelor's degree	Competition will be keen	$875 to $2000/mo.

APPENDIX D-1

Worksheet for POPEYE AND CONSTRUCTION CAREERS

1. More than ____________________ people work in the construction industry.

2. There are more than ______________ different construction jobs, from laborer to highly skilled individuals.

3. List 13 occupations and the number of construction workers in each area.

    1.
    2.
    3.
    4.
    5.
    6.
    7.
    8.
    9.
    10.
    11.
    12.
    13.

APPENDIX D-2

BUSINESSES AND OCCUPATIONS IN THE SIOUX FALLS AREA THAT RELATE TO WOODWORKING

Home Builders Association
225 S. Main
ph. 334-4441

Ronning Enterprises Inc.
4401 E. 6th
ph. 336-0730

Maloneys Custom Cabinets
3429 S. Spring
ph. 338-4771

Quality Custom Cabinets
2000 Industrial Ave.
ph. 336-2090

Carlson, Milton D.
1408 S. Hawthorne
ph. 332-3236

Soo Empire Plywood
525 N. Kiwanis
ph. 336-2897

Murray Arnold Construction Co.
4905 Cottonwood
ph. 338-4251

Olson Lumber Co.
505 Falls Park Dr.
ph. 336-3368

Schoeneman Bros. Lumber
305 E. 8th
ph. 336-2440

Sutherland Lumber Co.
1111 N. Cliff
ph. 336-1920

SELECTED REFERENCES

Printed Materials

D.O.T., Government Printing Office

IACP - World of Construction & World of Manufacturing, McKnight Pub. Co.

Industrial Careers Kit, Largo Florida

Industrial Education, March, 1973.

Occupational Outlook Handbook, Government Printing Office

Popeye and Construction Careers, King Features.

Popeye and Manufacturing Careers, King Features.

School Shop, April, 1973.

Science and Engineering Kit, Largo Florida.

Films:

"Careers-Construction" #91580 Double-Day Multimedia

"Machinist" #633703 McGraw-Hill

"Opportunities in Logging" Georgia-Pacific

"What's So Special About Paper" #3652 Modern

Filmstrips:

"Age of Electronics" Bowmar Glendale, California

"Aircraft Assemblers" Guidance Associates

"Jobs For The Now Generation" Bowmar Glendale, California

"Model Builders" Guidance Associates

"People Who Make Things" Guidance Associates

"The Nation's Builders" Bowmar Glendale, California

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

LANGUAGE ARTS

Grade 8

Prepared by

Dennis Becker

&

Le Roy Vanden Bos

INTRODUCTION

The career awareness program stresses the importance of language arts skills in life's work situations. Many students need to know why language skills are important and their questions are answered as they explore careers that use the subject matter as a job skill. As each student becomes involved in class actvities and individual research on the importance of language skills, he will realize that all jobs utilize these skills to some extent.

The career awareness material is intended to be integrated into the language arts curriculum for a total of ten days, spread throughout the school year. The activities suggested can be used in part or in total depending upon the particular needs of the individual instructor.

A DESCRIPTION OF THE CAREER AWARENESS PROGRAM IN THE FIELD OF LANGUAGE ARTS

In the eighth grade block-of-time, we have attempted to integrate a career awareness program into the language arts curriculum by incorporating it with spelling, speech, drama, literature, vocabulary, creative writing, and newspaper.

We have choosen these areas because we did not want to add a new program to the present curriculum, and we feel the program should be of such nature that it will encourage all teachers in our block-of-time to utilize some of the material which is included in this resource guide.

OBJECTIVES

A. Students will improve vocabulary and spelling skills associated with the "world of work".

B. The student will realize that he develops himself socially, mentally, and emotionally in the area of his life's occupation.

C. The student will identify and evaluate his self characteristics which will help him in terms of the occupation he thinks he may wish to pursue.

D. Students will develop more effective listening, observing, and reading skills.

E. Students will be provided with basic exploratory work experiences in the multiple occupational fields requiring knowledge of journalistic arts.

F. Students will learn to communicate in an oral manner in the "world of work".

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Vocabulary and Spelling	Students will improve their ability to spell career terms used in our "world of work" Provide students with the vocabulary for our "world of work"	Stress the importance of correct spelling for better communication in all careers. Explain the use of suffixes such as: -ant, -ist, -eer, -er, -or which usually indicate one who does something, i.e. stenographer, biologist, and chiropractor. Students make and keep in their folders a cumulative list of words and terms used in their various areas of interest. Institute a "word of the week" program making a list of career terms or possibly some terms used in the "world of work" and keeping it on prominent display throughout the year. Words like therapist, interpreters, hygenists, leisure, apprentice, punctuality, or pathologists should be included on this list.	Dictionaries Handbook of Job Facts Occupational Information Handbook Students' spelling textbook Pamphlets from the New York Life Insurance Company of careers Contact with persons involved in careers mentioned Selected list prepared by the instructor with local resource people in mind to introduce the occupational term occasionally Modern English in Action Chapter 3

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Literature Johnny Tremain	The students will, through the medium of the novel, see the historical rise of America	Discussion on types of work existing in the Revolutionary War period that are now extinct. For example, silversmith or blacksmith. Why?	Johnny Tremain Dell Publishing Co. 1969
	Students will be able to compare the position of children in Revolutionary War times and their position today	Ask students to give examples of careers today that have emerged because of our growing country. For example the communication industry. Discuss Johnny's progression from a top apprentice to a Revolutionary spy.	Film:"Johnny Tremain" Sterling Films Paul Revere and the World He Lived In Ester Forbes
	The students will realize that he develops himself socially, mentally, and emotionally in the area of his life's occupation	Since value judgments influence vocational choice, ask the students after having read the novel Johnny Tremain to write a composition explaining how his values changed over the last two or three years. Question students about the role of work in Johnny's life. How has it changed in the life of a boy thirteen years old today? Will the role of work change in the present student's life time?	Colonials and Patriots Frank Sarles America's Paul Revere Dorothea Fisher Fathers of America's Freedom Donald Cooks
Lantern In Her Hand Across Five Aprils Shane No Promises in The Wind	The student will analyze the changes which have taken place in his value system as he moves toward maturity	As the students read short stories, plays, and novels, research and discuss the background of the different authors and study their success in this particular career. Alert the students to this type of occupation as they study the various aspects of literature.	The Incredible Deborah Cora Cheney

Subject Language Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Creative Writing	The student will explore the possible ways in which his contributions to the world of work will be most effective and rewarding The student will identify and evaluate his self characteristics which will help him in terms of the occupation he thinks he may wish to pursue	Introduce and present filmstrip on "Choosing Your Career". After the filmstrip, discuss the self concept as it relates to the individual. As a follow-up study, have the student rate himself on a personality trait chart. (see Appendix A) A positive concept of self enables the individual to enter and function in the working world. Ask each student to write a theme in which he discusses his self concept in terms of personality traits, interests, abilities, and his personal value system. Writing may contribute to a positive concept of self. The students will write a theme describing an incident in their life where they have done a good job and one which they believe has benefited someone or contributed to the improvement of their community. Introduce and show the filmstrip, "People Who Help Others". Students will record skills observed in different occupations studied in the filmstrip.	Filmstrip: "Choosing Your Career" Part I Guidance Associates (I.P.C.) Personality Trait List (see Appendix A) Filmstrip: "People That Help Others" Guidance Associates (Whittier) Writing Creatively Paulina Sherer Modern English in Actio Chapter 19 Filmstrip: "Developing Values" Guidance Associates (Whittier)

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	The student will identify how others contribute to the world of work	If the students need additional help on understanding values, show the filmstrip, "Developing Your Values"	Filmstrip: "Developing Your Values" Guidance Associates (Whittier)
	The student will analyze his abilities and interests in terms of occupational areas he may wish to enter	The student will prepare a resume of work he has done in school and in the community and analyze it in terms of self satisfaction. Develop a letter of application. Stress the importance of a "thank you" letter and develop a sample in class.	Film: "Waters of Yosemite" (I.P.C.)

Subject Language Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Drama	Students will develop more effective listening, observing, and reading skills Students will develop their manual dexterity Students will develop their motor coordination Students will develop or increase their positive self image Students will view himself as a worthy person Students will become aware of potentials and interests	See a play production presented by one of the colleges, local high schools, or the Community Playhouse. Visit one of the colleges or the Community Playhouse and have the director explain the many jobs that are required to stage a production. Analyze the attitudes and characteristics of the characters and try to determine what occupation they might be suited to preform i.e. a. playwright b. actors - actresses c. play director d. costume designer e. production manager - f. sound technician g. light technician h. music director i. carpenter j. make-up artist Present an all school play or give a play from one of our anthologies to another class during school. Stress the importance of good speech and posture required for acting occupations.	Local high schools and colleges Community Playhouse Literature books: A. Exploring Literature 1. "Twelve Angry Men" 2. "The Jest of Hahalaba" B. Counterpoint 1. "The Diary of Ann Frank" 2. "Bride somes to Yellow Sky" C. Journeys into America 1. "Voice of the Wizard" 2. "The Admiral and the News"

Subject Language Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Newspaper	Students will be able to interpret tables, graphs, and charts Students will become aware of potentials and interests Students will be provided with basic exploratory work experiences in the multiple occupational fields requiring knowledge of the journalistic arts	Want Ad Survey: Have each student clip out at least ten different want ads representing the various careers which are involved in the automobile industry. On a section of the bulletin board, have the students clearly lable sections for each major occupational area. Each student will then place each of his want ads in the appropriate job family. In this way, the students will see the vast array of careers which are involved in the automobile industry. Want Ad Comparison: Have students divide into groups of four or five. Each group should choose a newspaper from a large city, a different section of the country, and a rural community. The group will then read over the want ads, looking for differences in the following areas from the job catagories on the bulletin board: a. kinds of occupations listed b. rate of pay, if listed c. is the occupational listing seasonal Follow-up to the Want Ad Survey and Comparison: In a small group discussion, attempt to answer the following questions: a. How important is the factor of location when making a career choice?	Local, rural, and distant newspapers Good size bulletin board space Modern English in Action Chapter 13 Filmstrip: "Mass Media: Impact on a Nation" (I.P.C.)

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		b. Is the rate of pay the deciding factor in which job I might choose? c. Do I want a job that is seasonal in nature (greatly affected by climate and weather conditions) or do I want an indoor job? d. Should I choose a job that is in high demand and pays well, or should I choose a job that may pay less but will provide more personal satisfaction? e. What do I need to get out of life and work in order to call myself successful?	
	The students will understand the language peculiar to the newspaper industry	Introduce the Sioux Falls Argus Leader's "Newspaper in the Classroom", or consult a local newspaper's circulation manager in your area. Write a lead paragraph which must answer the following questions: Who, What, When, Where, and Why. Write editorials, feature stories, sport stories, advertisements, and possibly cartoon scripts. Discuss the various related fields and career opportunities centered around the journalism industries.	Optional: "Newspaper in the Classroom" Contact the local newspaper for more information Guest Speakers: News reporters Photographer Editor Circulation manager Deviery boy

Subject Language Arts

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Students will understand the important role newspaper advertising plays in the economic life of the community as an essential link between the consumer and the merchant	Visit the local newspaper office and see the various at work and have them speak to the class concerning the nature of their work. Have the students prepare a shopping list of the following items, showing where he can obtain the best prices: Brand Store Price Chicken ____ ____ ____ Slacks ____ ____ ____ Shoes ____ ____ ____ Phonograph records ____ ____ ____ Ice cream ____ ____ ____	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Speech	Students will be able to answer the question "Why study speech?"	Observe and discuss people in their occupations who use speech, i.e. teachers, lawyers, salesmen.	Modern English in Action Chapters 11 and 15
	Students will be encouraged to perform outside the classroom, particularly in the local community	Discuss ways men make a living and the importance of the ability to express ideas well in each of the various occupations.	Video tapes (Whittier) "Fundamentals of Public Speaking" Film
	Students will learn to communicate in an oral manner in the world of work	Show the importance of knowing what to say and how to say it by assigning a few career oriented speeches, i.e. selling speech, radio and television speaking, or debating.	Tele-trainers (I.P.C.)
	Students will learn to develop their imagination and creative abilities	The students will demonstrate his ability to listen and follow directions effectively through a discussion of a speech given by another member of the class.	Films: "If An Elephant Answers" "A Manner of Speaking" "The Voice of Your Business" (Bell Telephone Co.)
	Students will identify and practice desirable attitudes and behaviors which generally apply to any work situation	Ask students to present a 3-4 minute sales speech on any one or all of the following: a. Persuade the audience to buy a product b. Persuade the audience to participate in some type of actvity c. Stress the use of imagination in creating an original product d. Stress the importance of repetition in salesmanship e. Discuss selling techniques in television	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		Attempt to acquire bodily ease by doing group pantomines or charades. Discuss information on factors concerning voice: a. pitch b. volume c. quality d. rate e. inflection Do learning activities on pp. 135-145 of Modern English in Action Select a person whose voice pleases you. Analyze qualities about this voice that please you. Bring your observations to class in the form of a well-organized one-minute talk. Do all learning activities in improving your enuciation and pronunciation habits. Show film of proper telephone techniques. Contact your local Bell Telephone Co. for more details.	Films: "Basic Organization of a Speech" "Introduction to Public Speaking" (I.P.C.)

Subject Language Arts

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		Ask students to write out good telephone conversations for the following incidents: a. Making a plane reservation b. Making an appointment with a doctor or dentist c. Ordering some item by phone d. Placing an ad in the newspaper by phone e. Planning a surprise party for someone f. Working out a program for your next club meeting g. Calling the drug store for the refilling of a prescription and asking that it be delivered Work in groups of two students. Give the conversations orally to the class. Prepare a bulletin board on various occupations where speech is extremely important.	

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Apex, North Carolina

New Albany City Schools
New Albany, Mississippi

Robbinsdale Area Schools
Robbinsdale, Minnesota

APPENDIX A

PERSONALITY TRAIT LIST

Directions: Read the entire list of personality characteristics and think about them carefully: then circle the numbers of the ten (10) traits which you think are the most desirable.

1. Pleasing appearance and voice
2. Courteous and tactful
3. Responsible and dependable
4. Creative and innovative
5. Loyal to friends and employer
6. Highly organized in work habits
7. Punctual in keeping appointments and commitments
8. Efficient in tasks performed
9. Enthusiastic about what you are doing
10. Energetic and persistent
11. Ambitious and career minded
12. Generous with time and advice
13. Dislikes arguing with people
14. Never let things or people upset you
15. Uses good judgment
16. Influences other workers by attitude or example
17. Show concern for fellow employees and those in authority
18. Cooperates with others
19. Possesses a good sense of humor
20. Practices good personal hygiene

APPENDIX A cont.

HOW DO YOU RATE?

Note: After determining the ten (10) most desirable traits, organize the form listed below.

Directions: These are the characteristics you selected as the most important to possess. Using the scale below, rate yourself on each of the traits, circling the figure "5" for the highest score, and figure "1" for the lowest, or one of the "in-between" figures which you think best describes _your_ position.

1.	Pleasing in appearance and voice	1	2	3	4	5
2.	Creative and innovative	1	2	3	4	5
3.	Highly organized in work habits	1	2	3	4	5
4.	Effective in tasks performed	1	2	3	4	5
5.	Energetic and persistent	1	2	3	4	5
6.	Ambitious and career minded	1	2	3	4	5
7.	Generous with time and advice	1	2	3	4	5
8.	Dislikes arguing with people	1	2	3	4	5
9.	Never let things or people upset you	1	2	3	4	5
10.	Practices good personal hygiene	1	2	3	4	5

SELECTED REFERENCES

Printed Materials

Aldrich, Bess. Lantern in Her Hand (Grosset and Dunlap), 1964.

____________. "Career Education Curriculum Guide", (Anne Arundel County Public Schools, Annapolis, Maryland), 1972.

____________. "Career Education Curriculum Guide", (Apex, North Carolina), 1972.

____________. "Career Education Curriculum Guide", (New Albany, Mississippi), 1971.

____________. "Career Education Curriculum Guide", (Robbinsdale Area Schools, Robbinsdale, Minnesota), 1971.

____________. "Career Pamphlets", (New York Life Insurance Co., New York).

Cheney, Cora. The Incredible Deborah, (Scribner), 1969.

Christ, Henry. Modern English in Action, D.C. Heath and Co., Boston), 1965.

Cooke, Donald. Fathers of America's Freedom, (Hammond), 1960.

____________. Counter point in Literature, (Scott Foresman and Co.), 1967.

____________. Exploring Literature, (Houghton-Mifflin Co., Boston), 1968.

Fisher, Dorothea. Paul Revere and the Minute Men, (Random House), 1950.

____________. Five American Adventures, (Harcourt, Brace and World, Inc., Chicago), 1963.

Forbes, Esther. Johnny Tremain, (Houghton-Mifflin Co.), 1943.

Forbes, Esther. Paul Revere and the World He Lived In, (Houghton-Mifflin Co.), 1942.

Hunt, Irene. Across Five Aprils, (Grosset and Dunlap), 1964.

Hunt, Irene. No Promises In The Wind, (Grosset and Dunlap).

_________. Journeys Into America, (Houghton-Mifflin Co.), Boston, 1956.

_________. Handbook of Job Facts, (Science Research Associates, Chicago).

Kottmeyer, William, and Kay, Ware. Basic Spelling Goals, (Webster Publishing Co.), 1972.

_________. Occupational Information Handbook, (South Dakota Vocational Technical Education, Pierre), 1970.

Sarles, Frank. Colonials and Patriots, (Department of the Interior, Washington, D.C.), 1964.

Schaefer, Jack. Shane, (Houghton-Mifflin Co., Boston), 1949.

Sharer, Paulina. Writing Creatively, (Bureau of Publications, New York), 1962.

Films

"A Manner of Speaking" No. 603 (Bell Telephone Co.).

"If An Elephant Answers" No. 732 (Bell Telephone Co.).

"Fundamentals of Public Speaking" (I.P.C.).

"Johnny Tremain" (Association Sterling Films).

"Waters of Yosemite" (I.P.C.).

"The Voice of Your Business" No. 550 (Bell Telephone Co.).

Filmstrips

"Basic Organization of A Speech" (I.P.C.).

Filmstrips cont.

"Choosing Your Career" (Guidance Associates).

"Developing Your Values" (Guidance Associates).

"Freedom of Press" (I.P.C.).

"Introduction to Public Speaking" (I.P.C.).

"Mass Media: Impact on A Nation" (I.P.C.).

"People Who Help Others" (Guidance Associates).

A GUIDE TO SELF AND CAREER AWARENESS THROUGH SCIENCE

GRADE 8

Prepared by: K. D. Ludeman

INTRODUCTION

It is difficult growing up today. Preparation and successful entry into the work world is a complex task. It is the obligation of schools to help youth understand the opportunities and demands of our society in terms of their interests and qualifications in order to help them plan accordingly. The student must realize their basic personal qualities such as general aptitudes, interests, special aptitudes, mental abilities, talents, academic endeavors, social needs, and emotional needs. Other more unique qualities for the person are study habits, aspirations, realistic concepts of self, preferences, habits, human relations and experiences. All of these are factors which have an impact on and which influence the kinds of avenues the student will explore to establish goals and long-range plans for their life style.

It is the intent of this Unit to provide a flexible structure which will facilitate, for the student, involvement, discussion, thought and fact-finding discoveries regarding the Science Fields in growth and Career Development.

The Unit is designed to be implemented through Eleven Topics to be covered in a suggested time span of approximately 10-12 normal class periods. These Topics can be integrated into the curriculum throughout the year, however it was the design of the author to have the Unit taken in two phases. Phase I covering Topics 1 and 2, to be covered at the beginning of Semester I, early in the school term and Phase II covering

Topics 3-11 to be covered in Semester II after the student has had at least some background knowledge in the subject matter of the Science Course in which he is enrolled.

A suggested time schedule might be as follows:

September: Topic 1 - 1 period
Topic 2 - 1 period

January: Topic 3 and 4 - 1 period
Topic 5 - 1 period
Topic 6 - 1 period
Topic 7 - 1 period
Topic 8 - 1 period
Topic 9 - 1 period
Topic 10- 2 periods
Topic 11- 1 period

The exact schedule of implementing the materials into the curriculum would be left to the individual instructor.

It was the intention of the author to provide a variety of and more than enough Suggested Activities to offer the inexperienced or experienced teacher many avenues of approach in completing each Topic. It is not expected that all Activities would be used under the structure of the suggested time schedule. This again is left to the desire of the individual instructor.

It is hoped that this guide will provide meaningful direction for instructors and knowledgeable activities for students to help them in becoming "more aware" of Self and Careers through Science.

O B J E C T I V E S

1. To enable the student to learn to identify the objectives in Science and relate them to problem solving in life.

2. Provide meaningful experiences to make the student aware of the applications of Science in Careers in a changing life style.

3. To make the student knowledgeable of what makes him a different individual in terms of physical, mental and emotional traits.

4. Provide meaningful learning experiences to help the student recognize that heredity and environment are determining agents in personal differences.

5. To make a reality out of recognizing that aptitudes, abilities and personal traits are tools for understanding ones self in relation to scientific interests.

6. The student will become aware that interests often lead to the road of choice in life's ambitions and that correlation between career and interests in Science create a more homogeneous life pattern.

7. Students will learn that the modern world is a rapidly changing world in terms of Science and Technology; creating more and new occupations.

8. To learn that occupations in Science can be grouped into broad clusters associated with the same field fo study.

9. Students will become aware that occupations in Science can be classified by job description into jobs dealing with Data, People and Things.

10. Through a surface study, students will become knowledgeable of at least 3 occupations in the Science and Technology fields.

11. To provide experiences for students to analyze personal information profiles and use this information to make initial decisions as to what occupation in Science or Technology this person would be suited to.

GENERAL UNIT OUTLINE

Question I: Why Study Science?

- Topic 1: Objectives of Science and the Scientific Method.
- Topic 2: Everyday Life Applications of Science.

Question II: How Do I Identify Through Science?

- Topic 3: Individual Differences.
- Topic 4: Factors Affecting Individual Differences.
- Topic 5: Abilities, Aptitudes and Personal Traits Related to Science.
- Topic 6: Interests In Science.

Question III: What About The World Of Work In Science?

- Topic 7: Science In The Changing World.
- Topic 8: Occupational Clusters In Science.
- Topic 9: Grouping Occupations in Science By: Data, People and Things.
- Topic 10: Investigating Careers in Science.

Question IV: Decisions--On What Basis?

- Topic 11: Correlating Information Gathered To Assist In Dicision Making.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Question I: Why Study Science?			
Topic 1: Objectives of Science and the Scientific Method.	To enable the student to learn to identify the objectives in Science and relate them to problem solving in life.	List the 5 objectives of Science. Discuss their importance in occupations dealing with Science. The Five Objectives of Science: 1. To develop an understanding of scientific facts about our environment. 2. To develop an understanding of scientific concepts and principles. 3. To learn to use basic skills needed for finding scientific data. 4. To develop the ability to solve problems. 5. To develop an understanding of the place and potential of science in modern living.	Films: "Why Study Science" McGraw-Hill. "Why Study Science" General Electric.
		Discuss the 5 steps in the "Scientific Method of Problem Solving" in relation to careers in science. 1. Existence of a problem. 2. Gather information about the problem. 3. Formulate a hypothesis. 4. Test the hypothesis. 5. Formulate a conclusion about the problem.	Most Science Texts. Stollberg, Robert. "Problem Solving", Science Teacher, 23 (Sept. 1956) 225-228F.
		Show film on "Scientific Method". Discuss how this might be applied to problems in life.	Films: "Scientific Method" Encyclopedia Brittanica (IPC). "Using the Scientific Method" Coronet.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 1: cont.		Ask student to name one problem he faces. Have him list how he would attack problem using steps in the Scientific Method.	Steps in Scientific Method.
		Have each student write down one superstition they have heard of. Select several and discuss the scientific approach to superstition. Use this to illustrate the concept of self-determination in life.	Film: "Science and Superstition" Coronet
Topic 2: Everyday Life Applications of Science	Provide meaningful experiences to make the student aware of the applications of Science in Careers in a changing life style.	Student chooses some simple commodity important to him such as Dill Pickle, Hamburger, Pencil, Blouse, etc. Trace the production of this commodity in reverse from product to conception. Use a flow chart to aid. Pick out the jobs dealing with science.	Appendix: Example 1 - "Flow Chart for Commodity Production".
		Student will interview father or mother or some other member of the job community to find out what relationship the study of science subjects has in their occupation.	Appendix: Example 2 - "Interview Report Sheet"
		Panel discussion on the importance of Science in modern times in terms of National Defense and Welfare, International Affairs, and Business, Industry, and Agriculture.	Newspapers, Time, U.S. News and World Report, Newsweek.
		Have Students write short paragraphs on the importance of science in the areas of Health, Recreation, Social, Cultural, and Economics. Pick out several to be read in class.	Newspapers, Time, U.S. News and World Report, Newsweek.

Subject Health

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 2: cont.		Have students clip want-ads from newspapers and show the wide variety of occupations in science in life. Arrange these on a bulletin board under the heading of "Science Careers in Life".	Newspapers from area.
		Show film on Scientific Research. Discuss with respect to creating job market.	Film: "A Light in Nature" Shell. "Horizons Unlimited" Modern
Question II: How do I Identify Through Science?			
Topic 3: Individual Differences	To make the student knowledgeable of what makes him a different individual in terms of physical, mental and emotional traits.	Using a prepared Physical Characteristics Recording list have students determine each others' physical characteristics: height, weight, color eyes, color hair. Use the results to compile an average class female and an average class male. Discuss how closely each student fits our average individual and why physical differences occur.	Appendix: Example 3 - "Physical Characteristics Recording List"
		Discuss how certain physical, emotional or mental traits might have a relation to certain jobs in science Careers. Use filmstrip or film to initiate discussion.	Filmstrip: "Personality and Physique" Popular Science (IPC)
		Have students analyze the following jobs in terms of physical characteristics essential to success. 1. Geologist 7. Missile Security Guard	List of physical characteristics:height, weight, strength, manual dexterity, endurance.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 3: cont.		2. Chemical Truck Driver 3. Secretary 4. Plant Horticulturist 5. Nurse 6. Research Chemist 8. Science Teacher 9. Missile Mechanic 10. Engineer 11. Science Writer 12. Aircraft Assembler	allergies, sight, hearing, speech, attractiveness, and personal hygiene.
		Have students complete check sheet, Looking at my Grades with the purposes of analyzing what grades tell about myself, how much of my true effort do my grades reflect, and what are my strengths according to my grades?	Appendix: Example 4 - Check Sheet "Looking at my Grades" Filmstrip: "Your School Record Is Important" Popular Science (IPC)
Topic 4: Factors Affecting Individual Differences.	Provide Meaningful learning experiences to help the student recognize that Heredity and environment are determining agents in personal differences.	Class discussion on how heredity plays a role in determining their individual differences. Bring in the Laws of Heredity in determining certain traits such as eye color for example. Use film on Heredity to initiate discussion.	Film: "Laws of Heredity" Encyclopedia Brittanica (IPC).
		Have students list their heredity traits, which may be characteristic to their family members.	
		Students will pick some change that has occured in our past history and relate this change to environmental factors. Example: Disappearance of the Wooly Mammoth or demise of the horse as a means of providing energy for agriculture.	Short explanation of the meaning of Environmental Factors.
		Show film on subject of Heredity and or Environment and discuss in terms of effect of on our lifes' goals.	Film: "Heredity and Family Environment" McGraw-Hill.

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 4: cont.		Show filmstrip on sbuject of Heredity and or Environment and discuss in terms of effect of on our lifes' goals.	Filmstrip: "Heredity" Popular Science (IPC)
Topic 5: Abilities Aptitudes and Personal Traits Related to Science	To make a reality out of recognizing that aptitudes and abilities and personal traits are tools for understanding ones' self in relation to scientific interests.	Prepare 5 simple problems dealing with competency in the following scientific aptitudes: manipulative (Lab techniques), reasoning, numerical, memory and creative. Students work in pairs, one taking the aptitude test, the other evaluating their performance. Allow a certain time limit for each problem to be completed (Ex: 2 min.) After completion of the problems and checking answers, evaluate the performances as above average, average, or below average. This evaluation will depend upon the individual instructor. Discuss what occupations or jobs in science these aptitudes are important in.	Appendix: Example 5 - "Scientific Aptitude Test."
		Invite a scientist to talk to the class about abilities, aptitudes, and personal traits needed for a career in science.	Guest Speaker from Industry, College, or Business.
		Have students write up and dramatize "role playing skits" depicting personal traits and their importance in job relations. Example: A "Do-No-Wrong" placing blame on someone else for his mistakes.	List of personal traits.
		Use teacher prepared Self Appraisal Rating Sheets to have students rate themselves as to abilities or aptitudes and personal traits related to science careers. Discuss the rating sheet prior to completing for understanding and after completion for comparison.	Appendix: Example 6 - "Self-Appraisal Rating Chart of Abilities and Aptitudes."

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 5: cont.		Have students complete a personal Self-Picture Checklist Discuss with the class how each personal trait is important to his life endeavors.	Appendix: Example 7 - "Personal Self-Picture Check List."
		Show film on Personal Qualities as related to job success in life. Discuss with class.	Film: "Personal Qualities for Job Success" Coronet.
		Show filmstrip on Personal Qualities and Understanding Self. Discuss in class.	Filmstrips: Putting Your Aptitudes to Work" "Understanding Myself" "Your Search for Self" Popular Science (IPC)
Topic 6: Interests In Science.	The student will become aware that interests often lead to the road of choice in lifes ambitions and that correlation between career and interests in Science create a more homogeneious life pattern.	Have students list their hobbies or interests. Compile a class list and group those which are science related. Show filmstrip or film on Interests or Hobbies to initiate this activity.	Filmstrip: "Interests Pay Off" McGraw-Hill. "How To Develop Interest" Coronet.
		Give each student a copy of interest areas in Science and ask him to rate his interest in each area by hightly, moderately or slightly interested. Review the ratings with the class and relate them to Science Careers.	Appendix: Example 8 - "Interest Areas In Science Check List".
		Ask each student to plan a Science Project or Exhibit. Have him relate the choice for his project to his interest area as depicted in the preceding activity.	List of possible Science Projects will be helpful. - Showater, Victor M. and Slesnick, Irwin L. "Ideas for Science Investigations." Nationa Science Teachers Assoc.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 6: cont.		Students will complete a Self-Appraisal Interest Chart and try to relate whether their interests could lead toward a science oriented career.	Appendix: Example 9 - "Self-Appraisal Interest Chart."
		Administer Interest Test covering Science Interest Areas. Discuss meaning of outcome with students.	Interest Test: Test Yourself in Science, Scientific Manpower Commission.
Question III: What About The World of Work In Science?			
Topic 7: Science In The Changing World.	Students will learn that the modern world is a rapidly changing world in terms of Science and Technology creating more and new occupations.	Show filmstrip emphasizing changing job field in science	Sound Filmstrip: "Preparing for Jobs in the 70's" Guidance Associates. Special Report: Work Experiences of the Population in 1970, U.S. Dept. of Labor.
		Pick some modern science field and as a class project, determine its age of existence. Have students write down reasons for this field coming into existence.	
		Resource person to speak on how his occupation has changed in the last decade and the importance of retraining and creation of new jobs due to technology.	Guest speaker who has been at his job for at least 10 years. Ex: Chemist, architect, science teacher.

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 7: cont.		Student will explore the necessity of replacement of some energy creating natural resource with another source of energy or natural resource and the impact on creating or disappearance of jobs.	Example: Petroleum energy source replaced by atomic or solar energy source.
		Have students list occupations or jobs that were in existence during their grandparents prime, that are not in existence now.	Students could refer to grandparents for advice on this activity.
		Show film emphazing advancements in Science. Discuss.	Films: "Design for Life" Association-Sterling. "Listen, Listen", Ford Film Library. "Search", General Motors Corp.
Topic 8: Occupational Clusters in Science	To learn that occupations in Science can be grouped into broad clusters associated with the same field of study or same activity.	Explore a list of science related occupations and group these into clusters according to student accepted titles relating to type of work, field of study, etc. Example cluster breakdowns: 1. Eatth Sciences / 2. Life Sciences / 3. Physical Sciences or 1. Earth Sciences / 2. Life Sciences / 3. Chemistry / 4. Physics	Appendix: Example 10 - "Science Occupations Lists 1-2-3." Appendix: Example 11 - "Occupational Cluster Work Diagram." People and Jobs, U.S. Dept. of Labor.
		Using map of the city and colored pins, pinpoint those businesses or industries that employ 2, 3, 4 or more different jobs involving training in some field or science.	Map of the city usually obtained from City Hall. Colored pins. Telephone Yellow Pages.

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 8: cont.		Resource person from State Employment Office to come in to disucss the job market in various fields of science	Guest Speaker: State Employment Office.
		Discuss Occupational Charts on Chemistry, Physics, and Biology. Determine if this is an adequate method of clustering occupations in sciences. Note the overlap of occupations from one field to another.	Charts on Occupational Clusters (Chemistry, Physics, Biology), North Dakota State Education. Appendix: Example 10 and 11
		Show filmstrips on Careers in Science.	Filmstrips: "Careers in Science", Popular Science (IPC) (Whittier) "Age of Electronics" with sound, Bowmar (IML) "Your Future in Engineering Technology" with sound, Guidance Associates (IPC) "Looking Ahead to Biology" "Looking Ahead to Chemistry" "Looking Ahead to Biology" Cottrell Safety Service (IPC)
		Show films on various Occupational Fields in Science.	Films: "Decision For Chemistry", Modern.

Subject Science Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 8: cont.			"Jobs in Atomic Energy" U.S. Atomic Energy Commission. "Your Future in Electronics", RCA Institutes.
		Have students go out into the community and take slide pictures of occupations or jobs that are connected with scientific fields or use a teacher prepared slide set on same topic to discuss the communities occupations involving science.	Cameras, slide film, flash units, permission release form. Prepared slide set: "My Community Occupations In Science", (Whittier)
Topic 9: Grouping Occupations in Science by Data, People, and Things.	Students will become aware that occupations in Science can be classified by job description into jobs dealing with Data, People and Things.	From a set of 35 teacher prepared cards, have students draw one card listing an occupation in Science. Student will place occupation card in one of three boxes marked: Data, People, or Things according to type of work the occupation deals with. Have the three categories defined on the chalk board. Student must be able to defend his selection. Could also be accomplished by using a list of occupations and having each student group the whole list into the above three mentioned categories. Compare lists as a culminating activity.	Appendix: Example 10 - "Science Occupations List 1-2-3." Appendix: Example 12 - "Suggested List of 35 Occupations in Science Grouped into Data, People, Things." Appendix: Example 13 - "Data, People, Things Work Chart". Dictionary of Occupational Titles, U.S. Governmental Printing Office. (Whittier)

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 9: cont.		Take a field trip to some industry in the area employing people in several occupations involving training in science. Have students group jobs observed by Data, People, Things concept.	Appendix: Example 14 - "Field Trip Information Reporting Sheet". Possible Field Trips: College Science Depts. Chemical Industry EROS Facility Meteorological Station Aerospace Facility Military Base Meat Packing Industry
		Discuss Occupational Charts on Chemistry, Physics, Biology as to clustering occupations listed by Data, People, Things.	Charts on Occupational Clusters (Chemistry, Physics, Biology), North Dakota State Board for Vocational Education.
		Provide students with a list of career areas in Science and have students indicate the minimum level of education necessary to gain entry into this occupation. Use the educational levels: Pre-high school, High School, Post High School (Voc.), College.	Appendix: Example 15 - "Career Analysis in Relation to Educational Requirements for Entry."
		Show filmstrip on People Who Work in Science. Discuss.	Filmstrip: "People Who Work in Science", sound, Guidance Associates.

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 10: Investigating Careers In Science.	Through a surface study students will become knowledgable of at least 3 occupations in the Science or Technology Fields.	Have students carry out a partial depth study of 3 occupations in careers dealing with Science or Technology. For variety students should do 1 each on Data, People, and Things. See resources for availability of materials to assist the student. Have the student use a teacher prepared Investigation Form.	Appendix: Example 16 - "Investigating An Occupation." Occupational Outlook Handbook. Encyclopedia of Careers and Vocational Guidance Occupational Outlook Quarterly. Career World Magazine. Science Careers Kit. Occupational Manpower Training Needs, Bulletin 1701. Career Interest Guide. Popeye Career Comic Book. Video Tapes on Vocational Careers in Science and Technology. Career Pamphlets, Cal. Poly. Keys to Careers in Science and Technology. Brochures on Careers. Can I Be An Engineer? Can I Be A Scientist? Can I Be A Technician?

Subject Science

Grade Level 8th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 10: cont			ERIC. Chronicle Occupation Microfile. VIEW. (Publishers and sources for resource materials listed above and on preceding pages in conjunction with Topic 10 can be found in the Selected References for this Unit.)
Question IV: Decisions--On What Basis?			
Topic 11: Correlating Information Gathered To Assist In Decision Making	To provide experiences for students to analyze personal information profiles and use this information to make initial decisions as to what occupation in Science or Technology this person would be suited to.	Give students Rating Chart with 5 occupations in Science listed. Have students rank the importance of subjects taken in school to success in these particular occupations. Rank subjects as: E - Essential - Subject matter is absolutely necessary for success in this job. I - Important - Subject matter is important to success in job, although it may not be absolutely required. U - Useful - Subject is useful but usually not directly related. S - Somewhat Useful - Subject is somewhat useful in job. L - Little - Subject is of little value to occupation.	Appendix: Example 17 - "School Subjects and Jobs."

Subject Science

Grade Level 8th

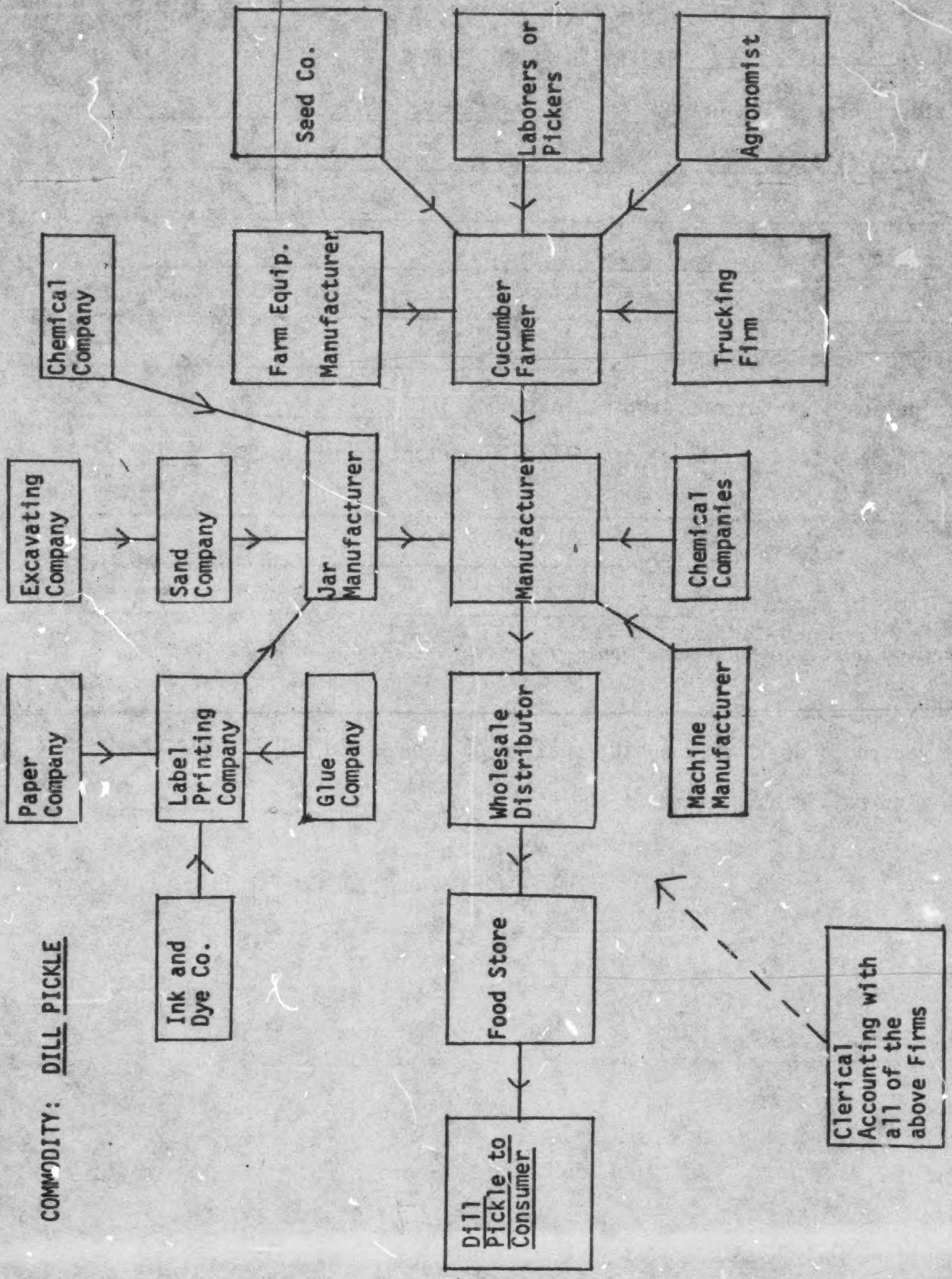
APPENDIX

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Topic 11: cont.		Subjects to rank might be: Speech/English/Writing/Math/Science/Social Studies/ Art/Music/Business Make up several Personal Profile Cards giving the following information: a. age b. grade level in school c. abilities d. personal traits e. interests f. family information such as economics and social g. verbal, quantitative, vocational test results h. achievement record in last 2 grade levels Distribute these cards among the class and have students arrive at an initial decision as to what occupation this person might be suited for in the science fields based on information given.	Appendix: Example 18 - Personal Profiles.

Subject Science

Grade Level 8th

Example 1: FLOW CHART FOR COMMODITY PRODUCTION


COMMODITY: DILL PICKLE
Seed Co.
Laborers or Pickers
Agronomist
Chemical Company
Farm Equip. Manufacturer
Cucumber Farmer
Trucking Firm
Excavating Company
Sand Company
Jar Manufacturer
Manufacturer
Chemical Companies
Paper Company
Label Printing Company
Glue Company
Wholesale Distributor
Machine Manufacturer
Ink and Dye Co.
Food Store
Dill Pickle to Consumer
Clerical Accounting with all of the above Firms

Example 2:

INTERVIEW REPORT SHEET

1. Title of occupation or job.____

2. Primary duties.____
____

3. Secondary duties.____
____

4. Level of education necessary.___________________________________

5. Did person like science studies in school?________________________

6. Does person find knowledge of science important in his work?_________
____

7. If "yes" in 6, in what way?_____________________________________
If "no" in 6, why not?____

8. Knowing what you know now, would you have taken more science in school?____

9. If you could do it over again, what occupation would you choose? (Keep in mind abilities, interests and aptitudes)____________________________

Example 3: PHYSICAL CHARACTERISTICS RECORDING LIST

PHYSICAL CHARACTERISTICS:

Height in inches:________________(closest inch)

Weight in pounds:________________(closest lb.)

Color eyes: Blue--Brown--Green--Hazel--Gray
(circle one)

Color Hair: Dark brown--Light brown--Red--

Black--Blonde
(circle one)

Example 4: CHECK SHEET--LOOKING AT MY GRADES

To the student:

The purpose of this check sheet is to help you think about:

What your grades tell you about yourself.
How much of your true effort your grades show?
What your grades show your strength to be.

1. The highest grades I received last year were in____________________

2. What do these grades tell you about how hard you tried in these classes?____________________

3. In which subject did you work the hardest?____________________

4. What do your grades tell you about your ability to memorize things?____

____

5. How did your grades measure your study habits?____________________

____

6. How did your reading skill affect your grades?____________________

7. In which subjects do you usually get the highest grades?______________

8. In which subjects do you get the lowest grades?____________________

9. In which subjects do you have the highest interest?________________

Example 5: SCIENTIFIC APTITUDE TEST

To the instructor: This test is designed to test the following scientific aptitudes: Manipulative (Lab techniques), Reasoning, Numerical, Memory, and Creative. Students work in pairs, one taking the test and the other the evaluator and scorer. Evaluator is to score each problem according to the direction for each problem. Be sure the student taking the test and the evaluator read the directions to each problem before the time for each problem is to begin. Time limit for each problem is 2 minutes. Evaluator keeps time on a room clock or stop watch.

Problem 1: Manipulative (Lab techniques)--Time 2 minutes.

Using a laboratory balance, weigh out a small object to the nearest 0.01 gram.

Answer: ______________________________

Score: 5 pts.--Answer correct to the nearest 0.01 gram.
3 pts.--Answer correct to the nearest 0.1 gram.
1 pt. --Answer correct to the nearest 1.0 gram.
0 pts.--Answer not correct in the whole gram position.

(Use pre-weighed objects and pre-set balances)

Problem 2: Reasoning--Time 2 minutes.

Listed are 3 sets containing 4 items each. Student is to make two statements on each set. 1. State how the items in the set are alike. 2. State how one item in the set is different from the others.

Set A: Violin, trumpet, harp, ukelele.

Set B: Knife, scissors, axe, scalpel.

Set C: Dog, whale, cow, duck.

Answers: Set A: 1. ____

2. ____

Set B: 1. ____

2. ____

Example 5: cont.

Set C: 1. ____

2. ____

Score: 6 pts.--All 6 answers correct. 5 pts.--5 answers correct. 4 pts.--4 answers correct. 3 pts.--3 answers correct. 2 pts.--2 answers correct. 1 pt.--1 answer correct. 0 pts.--No answers correct.

Problem 3: <u>Numerical</u>--Time 2 minutes.

Listed are three problems. One each in addition, multiplication, and division. Work the problems and give the answers.

A. <u>Addition</u>
```
 27653
 98765
+13578
```
B. Multiply 5787 X 6926

C. Divide 667.94 ÷ 18.2

Answers: A.______________ B.______________ C.______________

Score: 5 pts.--All three correct.
3 pts.--2 correct.
1 pt. --1 correct.
0 pts.--None correct.

Problem 4: <u>Memory</u>--Time 2 minutes

Listed are 3 sets of 5 items or figures each. Allow student to study the sets for 1 minute. He then is to write the three sets in the exact arrangement or order given.

<u>Set</u> <u>A</u>: 37618 <u>Set</u> <u>B</u>: BXRTC <u>Set</u> <u>C</u>: □ ○ △ – ▽

Score: 5 pts.--All correct.
3 pts.--2 correct.
1 pt. --1 correct.
0 pts.--None correct.
Also score ½ pt. for those sets which are not completely correct but have at least 3 items in the correct order.

Problem 5: <u>Creativity</u>--Time 2 minutes.

Student is given a puzzle consisting of different shaped pieces. Student is

Example 5: cont.

to create some equal sided geometric shape or figure from these pieces in the alloted time.

Score: 5 pts.--Figure completed in 45 sec. or less.
3 pts.--Figure completed in 46 to 75 seconds.
1 pt. --Figure completed in 76 to 120 seconds.
0 pts.--Figure not completed.

(Refer to Answer sheet)

Example 5: cont.

Answer sheet for Scientific Aptitude Test

Problem 1: Answer depends on what object the instructor pre-weighs.

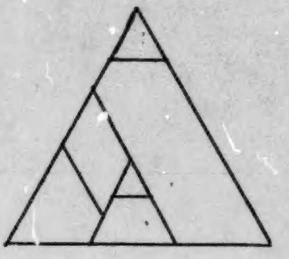
Problem 2: Set A: 1. All are musical instruments.
2. Trumpet is a wind instrument, rest are strings.
Set B: 1. All are cutting tools.
2. Scissors has two parts, rest have one.
Set C: 1. All are animals.
2. Duck is a bird, rest are mammals.

Problem 3: A. 139996 B. 40,080,762 C. 36.7

Problem 4: Answers will depend on individual student.

Problem 5: The following puzzle figure may be used cut up as illustrated.

Equilateral Triangle



Example 6: SELF APPRAISEL RATING CHART OF ABILITIES AND APTITUDES

Rate each Ability or Aptitude below by placing an (X) in the appropriate column.

	Above Average	Average	Below Average
1. Mental Ability			
Abstract reasoning	______	______	______
Numerical ability	______	______	______
Verbal ability	______	______	______
Visualization	______	______	______
Mechanical knowledge	______	______	______
Memory ability	______	______	______
2. Personal Qualifications			
Dependability	______	______	______
Ability to work alone	______	______	______
Good grooming	______	______	______
Tact and diplomacy	______	______	______
Industriousness	______	______	______
Self-confidence	______	______	______
3. Physical Traits			
General good health	______	______	______
Vision	______	______	______
Manipulation	______	______	______
Hand-eye coordination	______	______	______
4. Special Abilities			
Artistic	______	______	______
Creative	______	______	______
Personable	______	______	______

Example 7: PERSONAL SELF-PICTURE CHECKLIST

Place an (X) in the column which best describes the student.

	Always	Usually	Sometimes	Never
1. Honest				
2. Happy				
3. Friendly				
4. Sad				
5. Serious				
6. Sensitive				
7. Jealous				
8. Popular				
9. Shy				
10. Clumsy				
11. Show-off				
12. Afraid				
13. Kind				
14. Modest				
15. Proud				
16. Lazy				
17. Neat				
18. Thrifty				
19. Even-tempered				
20. Dependable				
21. Angry				
22. Moody				
23. Open-minded				
24. Unreasonable				
25. Demanding				

Example 8: INTEREST AREAS IN SCIENCE CHECKLIST

Place an (X) in the appropriate column for each interest area.

	Highly Interested	Moderately Interested	Slightly Interested
1. Animal life			
2. Plant life			
3. Mapping and map reading			
4. Conservation			
5. Electricity			
6. Electronics			
7. Nuclear energy			
8. Rocks and minerals			
9. Universe and space			
10. Chemicals and chemical change			
11. Weather and climate			
12. Personal and public health			
13. Environmental protection			

Example 9:

SELF-APPRAISAL INTEREST CHART

List below some of the activities which you like best and some you like least.

1. In School-

   Subjects I like most:

   Subjects I like least:

2. Outside of School-

3. Things I Will Do When I Can Do As I Choose-

4. Some Things I Have Never Done But Would Like To Do-

5. Some Jobs I Have Held, Either For Pay Or On A Voluntary Basis-

   Things I liked about these jobs:

   Things I disliked about these jobs:

6. My Hobbies-

Example 10: Science Occupations List 1

SOME OCCUPATIONS RELATED TO INTERESTS AND ABILITY IN THE EARTH SCIENCES

Agricultural chemist
Agricultural engineer
Agronomist
Anthropologist
Archaeologist
Astronomer
Cartographer
Chemist
Conservation officer
County agricultural agent
Dairy farmer
Forester
Forestry technician
Geographer
Geological engineer
Geologist
Geophysicist
Highway engineer
Horticulturist
Geomorphologist
Meteorologist
Minerologist
Mining engineer
Oceanographer
Paleontologist
Park ranger
Petroleum engineer
Petrologist
Seismologist
Teacher
Technical secretary

This list is by no means complete. We have only attempted to give some examples.

Example 10: Science Occupations List 2

SOME OCCUPATIONS RELATED TO INTERESTS AND ABILITY IN THE LIFE SCIENCES

Anatomist
Anthropologist
Bacteriologist
Biochemist
Botanist
Chiropodist
Chiropractor
Curator
Dental hygienist
Dentist
Dietitian
Entomologist
Florist
Food and drug inspector
Forest ranger
Game warden
Gardener
Geneticist
Herpetologist
Horticulturist
Ichthyologist
Livestock breeder
Masseur
Medical illustrator
Medical librarian
Medical research worker
Medical secretary
Museum worker
Naturalist
Nurse
Nurses' aide
Nurseryman
Nutritionist
Occupational therapist
Orderly
Orinthologist
Osteopath
Pathologist
Pediatrician
Physical therapist
Physician
Practical nurse
Phychologist
Psychometrist
Psychiatrist
Surgeon
Teacher
Technical secretary
Tree surgeon
Veterinarian
Zoologist

This list is by no means complete. We have only attempted to give some examples.

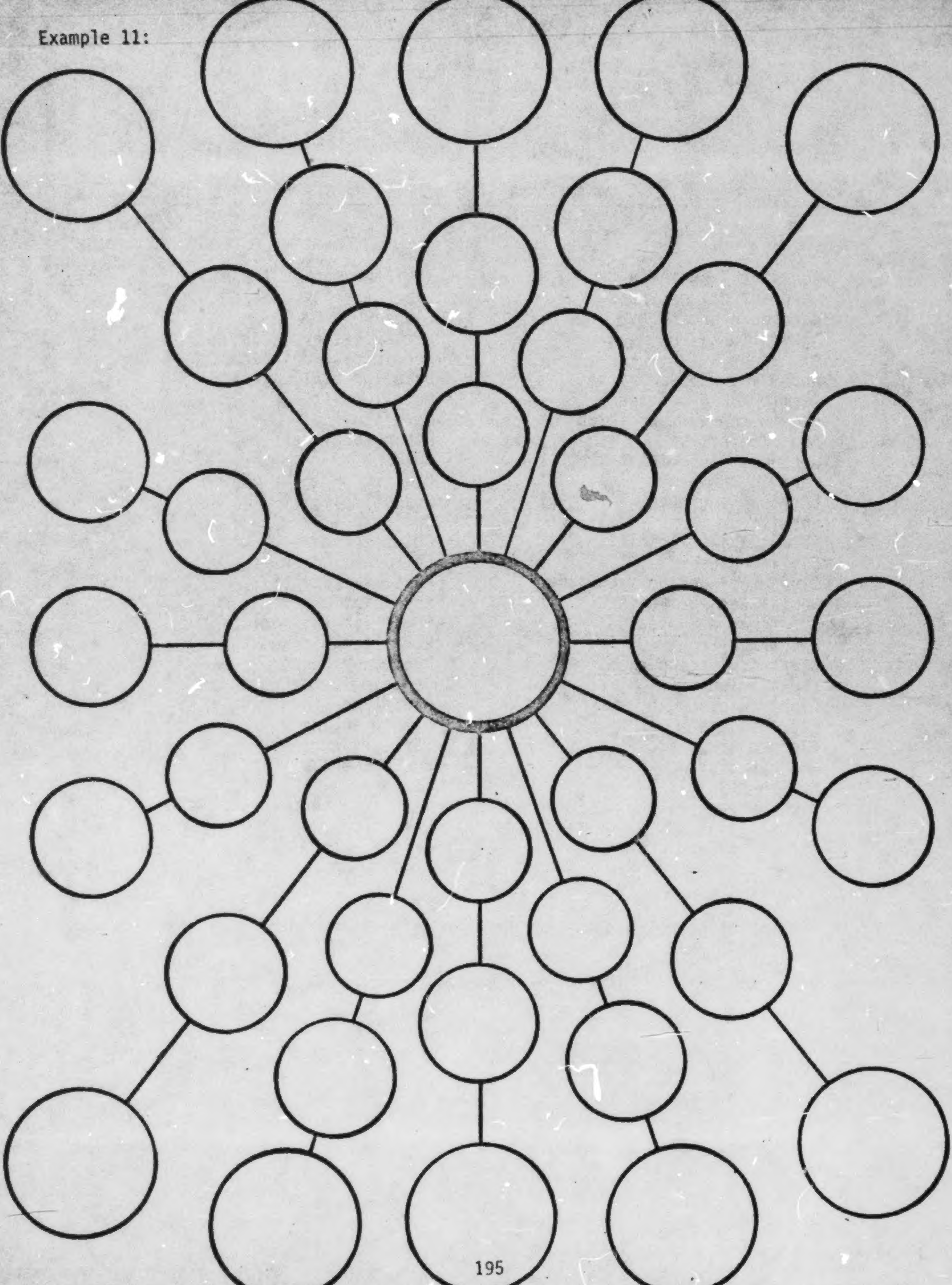
Example 10: Science Occupations List 3

SOME OCCUPATIONS RELATED TO INTERESTS AND ABILITY IN THE PHYSICAL SCIENCES

Acoustical engineer
Aeronautical engineer
Aerospace engineer
Agricultural engineer
Architect
Architectural technician
Atomic energy engineer
Atomic energy technician
Audiologist
Broadcast technician
Ceramic engineer
Chemical engineer
Chemist
Chemical lab technician
Civil engineer
Civil engineering technician
Dental technician
Draftsman all areas
Electrical engineer
Electrical technician
Electrician
Electronics engineer
Electroplater
Electrotherapist
Geophysicist
Health physicist
Highway engineer
Industrial electronics technician
Industrial engineer
Instrumentation technician
Laboratory technician
Lineman
Mechanical engineer
Mechanical engineer technician
Metallurgical engineer
Metallurgist
Meterologist
Mining engineer
Nuclear
Oculist
Ophthalmologist
Optician
Optometrist
Petroleum engineer
Photogrammetrist
Physicist
Physicist technician
Radar technician
Radio engineer
Radiologic technologist
Radio repairman
Safety engineer
Sanitary engineer
Systems analyst
Teacher
Technical secretary
Wool technologist
Writer, technical

This list is by no means complete. We have only attempted to give some examples.

Example 11:



Example 12: List of 35 Occupations in Science Grouped into Data, People, and Things

DATA	PEOPLE	THINGS
Seismologist	Science teacher	Forestry technician
Geomorphologist	Nurse	Museum worker
Petroleum engineer	Pediatrician	Gardener
Oceanographer	Practical Nurse	Electronics technician
Medical research worker	Dentist	Instrumentation technician
Forester	Masseur	Dental technician
Chemical engineer	Occupational therapist	Missle technician
Cartographer	Food and Drug inspector	Florist
Meteorologist	Phychiatrist	Electrical lineman
Biochemist	Chiropodist	Surgical assistant
Technical secretary	Physical therapist	Radio repairman
Safety engineer	Receptionist	

This is only a suggested list. You could prepare your own listing by refering to Dictionary of Occupational Titles.

Example 13: Data, People, Things Work Chart

From the list of 35 Occupations in Science (Example 12), place each occupation in the appropriate column according to Data, People,,Things.

DATA	PEOPLE	THINGS

There may be a tendency for some of the occupations to overlap into more than one column. However the main job function should lean more to one factor than another. (Refer to Dictionary of Occupational Titles, U.S. Gov't Printing Off.)

Example 14: Field Trip Information Reporting Sheet

Destination of field trip:

What occupations in science did you observe in action?

List several things you noticed in relation to the work carried on.

How do you think this trip helped you learn more about occupations in this field?

Example 15: Career Analysis in Relation to Educational Requirements for Entry

In selecting a vocation, one should give consideration to the education necessary for the entry level point. Your primary objective should be to reach the level necessary to insure a minimal marketable skill. This level will depend on your interest, abilities, and the training program in which you can involve yourself. A list of these career areas will serve as an aid in allowing you to focus your attention on an area of particular interest to you. If you have difficulties in selection of an area, it would be most beneficial to take an interest inventory to aid you in making a decision. The educational levels indicate to a degree the entrance requirements and are descriptive of the training of those with whom you might be competing. Let us define our terminology so we can more effectively communicate:

Pre-High School---Did not graduate from accredited High School. No diploma.

High School---High School diploma.

Post High School---Vocational or Technical School training either with or without a High School diploma.

College---Study in an approved or accredited College or University.

Directions: Indicate the Educational level necessary for entry into the career.

CAREER	EDUCATIONAL LEVEL FOR ENTRY
Chemical Research--------------------	
Aircraft Designer--------------------	
New Product Advertising--------------	
Lab Technician-----------------------	
Chemical Sales Work------------------	
Installing Lab Equipment-------------	
Operating a Machine------------------	
Science Equipment Repairman----------	

Example 16: Investigating an Occupation

1. Name of the occupation____

2. Occupation deals with (circle one) a. Data b. People c. Things

3. Exactly what does the worker do?______________________________
____

4. What equipment or tools does he use?____________________________
____

5. Educational requirements for entry: (circle one) a) Pre-H.S. b) H.S.
c) Post H.S.d) College

6. What personal qualifications, other than educational, are necessary?

Phyical____
s

Mental____

Aptitude or personality_______________________________________

7. What are the working conditions and hours?________________________
____

8. What are the wages or salary?________________________________
____

9. Who employs a person with this occupation?________________________
____

10. List as many related jobs as you can.___________________________
____

11. What interests of yours would this job be related to?________________
____

12. What interests of yours would this job satisfy?____________________
____

13. What is the future job outlook?________________________________

14. Where can I obtain further information about his career?____________.

Example 17: School Subjects and Jobs.

Subject / Job	Speech	English	Writing	Math	Science	Soc. Studies	Art	Music	Business
Administration of College Science Dept.									
Chemical Sales Person									
Field Geologist									
Dental Technician									
Oscilliscope Operator									

Mark code entries on chart according to the importance of the subject to the job.

Code:		
	E - Essential.	Subject matter is absolutely necessary. for success in this job or for completion of Educational Requirements.
	I - Important.	Subject matter is important but maybe not necessary.or required.
	U - Useful.	The subject is very usefulbut usually not directly related.
	S - Somewhat useful.	Subject is useful to a small degree.
	L - Little.	Subject is of little value to job.

Example 18: Personal Profiles

Kristy

Age: 16
Grade: Junior

Intelligent and creative. Grades 7, 8, 9 placed in gifted student classes. Has done nice things in Creative Writing and Art. As a Sophmore she changed and became absent, late and did poor work. Withdrew from Public school and enrolled in private school. Questions value of school now and societies values. Parents are college grads. Brother is research scientist. She stays up late painting or writing. Reads alot. Sees not much value in college.

Comprehensive tests: Verbal--Above average
Quantitative--Above average
Vocational--Above average

Marks in school:	Freshman:		Sophmore:	
	English	A	English	F
	Soc.St.	A	Soc.St.	F
	Math	B	Math	F
	French	A	French	F
	Biol.	B	Art	D
	Art	B	P.E.	Pass
	P.E.	Pass		

John

Age: 17
Grade: Junior

Poor school record. Failed twice. Gets along well with teachers and students. Well liked. Not afraid of work. Industrious. Doesn't mind school. Loves working with mechanical things. Good athlete and loves sports. Not eligible because of grades. Older brother went to Naval Academy. Father doesn't want him to go to school after H.S. Has a girl friend who is good student and encourages John to stay in school.

Comprehensive tests: Verbal--below average
Quantitative--below average
Vocational--Average

Marks in school:	Freshman:		Sophmore:	
	English	D	English	D
	Soc.St.	C	Soc.St.	D
	Spanish	D	Science	F
	Math	D	Business	C
	P.E.	Pass	Ind. Arts	C
			P.E.	Pass

Example 18: Personal Profiles

Betty

Age: 16
Grade: Junior

Repeated grade 6. Barely promoted each year. Works well with hands. Personable, talkative, nice looking, well groomed. Hates school. Always behind in classes. Absent and tardy alot. Has a part-time job and a boy friend. Little time spent studying. Father dead. Mother supports family with 2 younger brothers. Home Ec. teacher commended her on her job she did in Sewing Class in designing her own clothes.

Comprehensive tests: Verbal--Below average
Quantitive--Below average
Vocational--Average

Marks in school:

Freshman:	Sophmore:
English D	English F
Soc. St. D	Soc.St. D
Science F	Science D
Math C	Business C
P.E. Pass	Home Ec. C
	P.E. Pass

Bill

Age: 15
Grade: Junior

Likes to read. Favorite subject is Soc. St. Part time job. Not much study time. Shy, quiet. Does not socialize. Loves school. Fears he won't be able to finish because of family financial problems. Low income. Brother has heart disease which requires medical funds. Excellent student.

Comprehensive tests: Verbal--Above average
Quantitive--Above average
Vocational--Above average

Marks in school:

Freshman:	Sophmore:
English A	English A
Soc.St. A	Soc.St. A
French A	French A
Math B	Math A
P.E. Pass	Science B
	P.E. Pass

SELECTED REFERENCES

Printed Materials:

Brochures on Careers. Michigan Technological University, Office of Admissions.

"Can I be an Engineer?", "Can I be a Scientist?", "Can I be a Technician?". General Motors Corporation.

Career Interest Guide. Northern States Power Company.

Career Pamphlets. California Polytechnic State University, Information Services Office.

Charts on Occupational Clusters. (Chemistry, Physics, Biology). North Dakota State Board for Vocational Education.

Dictionary of Occupational Titles. U.S. Government Printing Office.

Encyclopedia of Careers and Vocational Guidance. Doubleday and Company.

"Keys to Careers in Science and Technology." 1970. National Science Teachers Assoc.

Showalter, Victor M. and Slesnick, Irwin L. Ideas for Science Investigations. National Science Teachers Assoc. 1966.

People and Jobs. U.S. Department of Labor.

Popeye Career Booklets. King Features, Special Services.

Stollberg, Robert. "Problem Solving," Science Teacher, 23 (Sept. 1956) 225-228f. National Science Teachers Assoc.

Occupational Manpower Training Needs. Bulletin 1701. U.S. Department of Labor.

Occupational Outlook Handbook. U.S. Government Printing Office.

Occupational Outlook Quarterly. U.S. Government Printing Office.

Printed materials: cont.

"Science Careers Kit," *Careers*, Largo, Florida. 33540.

"Test Yourself For Science," (Science Interest Test). Scientific Manpower Commission.

Work Experience of the Population in 1970. Bureau of Labor Statistics, U.S. Department of Labor.

Films:

"Decision for Chemistry," Modern.

"Design for Life," Association-Sterling.

"Heridity and Family Environment," McGraw-Hill.

"Horizons Unlimited," Modern.

"How to Develop Interest," Coronet.

"Jobs in Atomic Energy," U.S. Atomic Energy Commission.

"Laws of Heredity," Encyclopedia Brittanica Films. (IPC)

"A Light In Nature," Shell.

"Listen, Listen," Ford Film Library.

"Personal Qualities for Job Success," Coronet.

"Science and Superstition," Coronet.

"Scientific Method," Encyclopedia Brittanica Films. (IPC)

"Search," General Motors Corp.

Films; cont.

"Using the Scientific Method," Coronet.

"Why Study Science," General Electric.

"Why Study Science," McGraw-Hill.

"Your Future in Electronics," RCA Institute.

Filmstrips:

"Age of Electronics," 6 Sound filmstrips. Bowmar. (IML)

"Careers in Science," Popular Science Audio Visuals. (IPC)

"Engineering Technology," Sound filmstrip. Guidance Associates. (IPC)

"Heredity," Popular Science Audio Visuals. (IPC)

"Interests Pay Off," McGraw-Hill. (IPC)

"Looking Ahead to Biology," Cottrell Safety Service. (IPC)

"Looking Ahead to Chemistry," Cottrell Safety Service. (IPC)

"Looking Ahead to Physics," Cottrell Safety Service. (IPC)

"People Who Work in Science," 4 Sound filmstrips. Guidance Associates. (Whittier)

"Personality and Physique," Popular Science Audio Visuals. (IPC)

"Preparing for Jobs in the 70's," 2 Sound filmstrips. Guidance Associates. (IPC) (Whittier)

"Putting Your Aptitudes to Work," Popular Science Audio Visuals. (IPC)

Filmstrips: cont.

"Understanding Myself," Popular Science Audio Visuals. (IPC)

"Your School Record Is Important," Popular Sicence Audio Visuals. (IPC)

"Your Future in Engineering Technology," Guidance Associates.

"Your Search for Self," Popular Science Audio Visuals. (IPC)

Video Tapes:

"Video Tapes on Career Areas in Science and Technology," Audio Visual Television Studios, Lincoln High School, Sioux Falls, S. Dak. 57105.

Microfile:

"Chronicle Occupational Microfile," Chronicle Guidance Publications, Inc. (IML)

"Educational Resources Information Center," ERIC, Leasco Information Products, Inc.

"Vital Information for Education and Work," VIEW, VIEW Development Center, USD/Springfield, Springfield, S. Dak. 57062. (IML)

Tapes or Recordings:

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"A Guide for Teachers of a Course in Career Exploration for Grades 8-9-10," 1970.
Curriculum and Instructional Materials Center, State Department for Vocational and Technical
Education, 1515 W. Sixth Ave., Stillwater, Oklahoma 74074.

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

GENERAL MATH - ALGEBRA - GEOMETRY

Grade 9

Prepared by

Myron Fuerst

INTRODUCTION

This career awareness guide will in no way cover all the possibilities but should shed light on some of the more interesting and challenging occupations open to students with mathematical interest and ability. Besides teaching, there are very few career opportunities in which a person can function strictly as a mathematician. Most of the occupations available for those graduating with degrees in mathematics find themselves using mathematics as a major tool for some other field. This tool, however, is becoming increasingly important with our advancing technological age.

A mathematician may create mathematics as well as apply it. There are two types of mathematicians-the theoretical or pure mathematicians and the applied mathematicians. Theoretical mathematicians are concerned with ideas and inventing more mathematics or working in basic research. Applied mathematicians may work in business or industry as an auditor, engineer, or an actuary for an insurance company. Mathematics students should be interested in two seperate paths that the use of mathematics may take. First of all mathematics in theory and mathematics in application.

Ninth grade mathematics students with average or above ability in mathematics will take algebra or geometry. These would most likely be the students interested in occupations using advanced mathematics skills. Those students with below average mathematics ability or interest will be in general mathematics classes or adjusted curriculum classes. They will be very unlikely candidates for occupations requiring advanced mathematics skills. Therefore, an attempt has to be made to increase a student's knowledge of how mathematics skills are applied to almost every occupation in everyday society. Through the relation of subject matter to different occupational areas, student learning skills are strengthened and awareness of career characteristics is increased.

General mathematics students constantly have to be told or reminded of the need for mathematics classes. Therefore, insertion of career awareness information throughout the year should help to keep the general mathematics class more meaningful for the students. Several practical problems have been written to emphasize the uses of math skill in everyday society. To meet the career awareness objective, all careers or jobs related to that type of problem can be discussed and explored. These problems will be found in the appendix. Career related activities for algebra and geometry classes may be correlated with the textbook and utilized throughout the year.

There are undoubtedly many more resources and activities listed for each unit than can or should be used in any one class. Materials and activities can be selected and organized according to the needs and interests of the class.

MATHEMATICS AND RELATED FIELDS

Mathematics is not only a profession but also a very essential tool for many kinds of work. Mathematics, one of the oldest and basic sciences has been fundamental to understanding and expressing ideas in science, engineering, and human affairs. Widespread use of electronic computers in the natural sciences, medicine, engineering, and management and administration, has rapidly expanded employment opportunities for those people trained in mathematics.

"Approximately one-fourth of all mathematicians work in research and development. Nearly one-third are primarily college teachers, many of whom do research part-time. A little less than one-third are in management and administration-about one-half of whom manage and administer research and development programs. Most of the remainder are concerned chiefly with operations research or production and inspection (quality control) of manufactured products." *(page 140)

"Fields in which applied mathematics is used extensively include physics, engineering, and operations research; other fields include business and industrial management, economics, statistics, chemistry, the life sciences, and the behavioral science. Training in numerical analysis and programming is especially desireable for mathematicians working with computers." *(page 140)

Mathematicians also will be required in substantial numbers to solve an increasingly wide variety of complex research and development problems in natural and social sciences, and military sciences. "Increasing numbers of mathematics graduates are likely to be hired for jobs in high school teaching, statistics, acturial work, computer programming, systems analysis, economics, engineering, physics, geophysics, and life sciences." *(page 141)

"College level mathematics is needed by such professional people such as: teachers, biological scientists, physicians, dentists, veterinarians, pharmacists, economists, accountants, marketing researchers, purchasing agents, business administrators, band officers, phychologists, anthropologists, sociologists, social workers, political scientists, home economists, dieticians, geologists, geographers and meteorologists, astronomers, agricultural economists and research workers, soil conservationists, and foresters." **

Other occupations requiring a certain degree of competency in mathematics are: commercial draftsman, architect, airplane pilot, navigator, optometrist, surveyor, electronic technician, electrician, broadcasting technician, dental technician, and dentist.

More basic mathematics skills and concepts are also used by a: bookkeeper, accountant, cashier, banker, secretary, insurance salesman, commercial teacher, machinist, plumber, and carpenter. In fact, there is almost no job where the elementary skills of arithmetic are not involved. Mathematics skills of one level or another are imperative in every career area.

*Occupational Outlook Handbook, 1972 - 73 edition, U.S. Department of Labor, Bulletin 1700.

**Encyclopedia of Careers and Vocational Guidance, Volume I, Planning Your Career.

OBJECTIVES

Acquaint the students with the job opportunities in mathematics.

Introduce mathematics as a job skill.

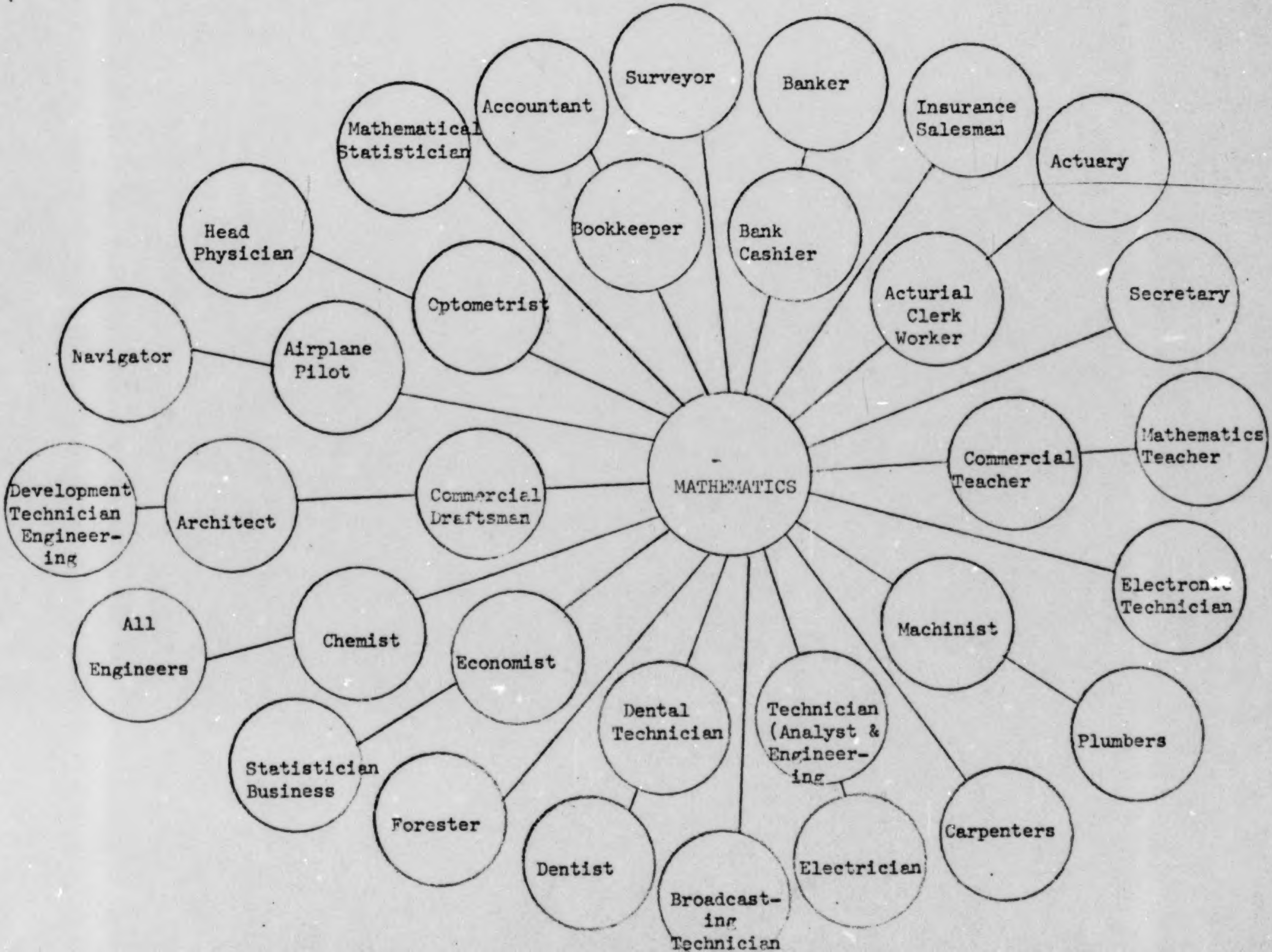
Show students that most jobs have a need for mathematics.

To point out the relationship between specific school courses and the jobs for which they can prepare a student.

Expose students to a wide range of occupational opportunities.

Develop understanding of the need for continued education or training needed in various career areas.

SOME OCCUPATIONS RELATED TO INTEREST AND ABILITY IN MATHEMATICS


MATHEMATICS
Mathematical Statistician
Accountant
Surveyor
Banker
Insurance Salesman
Actuary
Head Physician
Bookkeeper
Bank Cashier
Acturial Clerk Worker
Secretary
Optometrist
Navigator
Airplane Pilot
Mathematics Teacher
Commercial Teacher
Development Technician Engineering
Architect
Commercial Draftsman
Electronic Technician
All Engineers
Chemist
Economist
Machinist
Dental Technician
Technician (Analyst & Engineering
Plumbers
Statistician Business
Forester
Dentist
Broadcasting Technician
Electrician
Carpenters

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Banking Unit	Learn to apply basic mathematics skills: 1. add decimals 2. subtract decimals 3. write numbers in words Expose students to Related Jobs: 1. bookkeeper 2. accountant 3. personal records 4. banker 5. bank cashier	1. Alphabetize accounts 2. Record beginning balance of all accounts 3. Find a running balance after each transaction 4. Write three checks 5. Have spelling exercise on words in writing checks SEE APPENDIX I	PAMPHLETS: 1. Should you be a banker (New York Life) 2. Should you be an accountant (New York Life) 3. The story of Checks Federal Reserve Bank SPEAKERS: 1. bookkeeper 2. accountant 3. bank teller or personal manager MICROFILE: Chronicle Guidance CAREER KIT-Largo FILM: Fred Meets a Bank 13 min - rental $2.50 S.D.State University

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Planning a banquet or meal	Learn to apply basic mathematics skills: 1. multiply whole numbers 2. multiply decimals 3. multiply fractions 4. add decimals 5. divide by a whole number Expose student to related jobs: 1. restaurant manager 2. caterer 3. housewife 4. dietician 5. bakery manager	1. Select menu 2. Calculate cost for given group size 3. Calculate cost for one person 4. Calculate amount of food necessary for a given group size 5. Library research and oral reports by interested students 6. Speakers from related fields 7. Field trip 8. Bulletin board on related careers SEE APPENDIX II	SPEAKERS: 1. caterer 2. restaurant manager 3. dietician 4. baker MICROFILE: Chronicle Guidance POSTERS: Math in the Home Kitchen #2 J. Weston Walch FILMSTRIP: Bakery Forewoman Guidance Associates (IML) PAMPHLETS: 1. Should you be a Dietician (New York Life) CAREER KIT-Largo

Subject General Mathematics Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Repairing Automobiles	Learn to apply basic math skills: 1. multiply whole numbers and decimals 2. add decimals or fractions 3. percent Expose students to related jobs: 1. auto mechanics 2. parts man 3. cashier 4. bookkeeper 5. body shop 6. automotive re= searcher	1. Use J.C Whitney & Co. Parts catalog to find the cost and part numbers. 2. Record part numbers, quantity, price 3. Add total parts 4. Record labor from labor chart 5. Find total labor time 6. Find total labor charge 7. Find the total bill including: total parts, total labor, sublet labor, subtotal, tax, total SEE APPENDIX III	SPEAKERS: 1. Auto mechanic or shop foreman 2. cashier or bookkeeper 3. POSTER: Math In the Home #17 J. Weston Walch CAREER KIT - Largo MICROFILE: Chronicle Guidance FILMSTRIPS: 1. Automotive Researcher (IML) People Who Organize Facts Series Guidance Associates FILMS: 1. Verniers 20 min - rental $3.85 Univ. of Minn. No. 4B0224

Subject General Mathematics Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Repairing Automobiles			FILMS: continued 2. Automotive Service 11 min - rental $2.00 Univ. of Minn. No. 2B0005 3. Auto Mechanics: It's For You #3841 General Motors Modern Talking Pictures

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Map Study	Learn to apply basic mathematics skills: 1. reading numbers 2. recording numbers 3. subtract whole nos. 4. add whole numbers 5. percent 6. multiply whole no. 7. divide whole numbers 8. multiply fractions 9. add decimals 10. subtract decimals 11. divide decimals 12. multiply decimals 13. measurement in scale Expose students to related jobs: 1. travel agent 2. hotel or motel clerk 3. census taker 4. airplane pilot 5. ranger-state park 6. meteorolgy 7. resort manager 8. air traffic control	1. Bulletin board 2. Find population information on the highway map 3. Use a ruler and a scale of miles to determine distances between two locations 4. Figure automobile mileage 5. Look up general information on a map 6. Work problems dealing with expenses for motel rooms and meals. 7. Library research and oral reports by interested students 8. Speakers on how these skills are used in jobs SEE APPENDIX IV	S.D. Highway Map SPEAKERS: 1. pilot 2. travel agent 3. hotel, motel clerk 4. meteorologist MICROFILE: Chronicle Guidance POSTERS: J. Weston Walsch Math in the House Vacations #5 CAREER KIT - Largo

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Buying an Automobile	Learn to apply basic mathematics skills: 1. add decimals 2. subtract decimals 3. multiply decimals 4. add fractions 5. multiply fractions 6. multiplication 7. division 8. percent	1. Find the cost of an Automobile with certain extras. 2. Find downpayment and financing charges. 3. Figure wages. 4. Figure cost of repairs and maintainence. 5. Discuss cost of insurance and how premiums are determined. 6. Discuss adjustment of claims and the cost of accidents. SEE APPENDIX V	SPEAKERS: 1. auto salesman 2. loan officer 3. insurance agent or insurance adjuster. PAMPHLETS: 1. Should you be a Salesman (New York Life) 2. Should you be a Banker (New York Life) CAREER KIT - Largo MICROFILE: Chronicle Guidance Publications POSTERS: J. Weston Walsch Math in the Home 1. Savings #6 2. Borrowing #16 3. Maintaining a car #17 4. Long term Finance #18 FILMS: Cont. on next page

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Buying an Automobile			FILMS: 1. Automobile In America A-V #000562 IPC 2. Consumer Education-Installment Buying 13 min - rental $4.40 Univ. or Minn. FILMSTRIPS: 1. Automobile Insurance (IML) 2. The Price of Credit Guidance Associates 3. Comission Meaning and Application Using and Under=standing Numbers, Percents, and Percent Applications. (IPC)-AV #102426 SVE Educational Filmstrips 4. Insurance - Using and Understanding Numbers, Percents, and Percentage Applications IPC - AV #102428

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Furnish and decorate a house	Learn to apply basic mathematics skills: 1. area of squares 2. area of rectangles 3. area of triangles 4. scale drawings 5. convert measurement from one unit to another 6. Rounding off numbers 7. addition of decimals 8. division of decimals 9. multiplication of whole numbers Expose students to jobs using these skills: 1. architect 2. interior decorator 3. contractor 4. sales people A. carpet store (cont.)	1. Furnish a house 2. Decorate a house 3. Paint a garage 4. Shingle a garage 5. Make a scale drawing 6. Speakers on related jobs 7. Bulletin board display 8. Library research and oral reports on related jobs by interested students SEE APPENDIX VI	SPEAKERS: 1. general contractor 2. interior decorator 3. carpet, paint, or furniture salesman 4. department store personel manager 5. architect or draftsman FILMSTRIPS: 1. Decorating Made Easy (IPC - AV #101756) 2. Scale Drawing (IPC - AV #102421) 3. Areas (IPC - AV #103485) 4. Architecture and Your Life (IPC - AV #103599) 5. Insurance for the Home (IML) Insurance Information Institute

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Furnish and decorate a house	4. sales B. paint store C. lumber yard D. furniture 5. laborers A. painters B. plumbers C. roofers D. electrician E. plasterers F. cement mason G. ornamental iron workers H. dry-wall applicators		FILMS: (continued) 1. Building a House EB #2B0007 12 min - rental $2 Univ. of Minn. 2. Principles of Scale Drawings #2B0156 11 min - rental $2 3. Careers In The Building Trades 11 min - rental $2 Univ. of S.D. CAREER KIT - Largo MICROFILE: Chronicle Guidance POSTERS: J. Weston Walsch Mathematics in the Home 1. carpentry #3 2. painting #11

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Furnish and decorate a house			POSTERS: Continued 3. home improvement #12 4. planning a home #15 PAMPHLETS: 1. Should you be an Architect? (New York Life) 2. Should you go into Construction? (New York Life) 3. Should you be a Draftsman? (New York Life) 4. Should you be a Salesman? (New York Life)

Subject General Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics in sports and athletics	Learn how mathematics and statistics are used by sports editors, reporters, or broadcasters.	1. Watch filmstrip on T.V. Sports Editor. 2. Analyze and discuss sports section in daily newspaper as to the different applications of statistics.	FILMSTRIP: T.V. Sports Editor-People Who Organize Facts series - Bowmar (IML)
	Learn how arithmetic and geometry skills and concepts are involved in sports.	3. Discuss various geometrical shapes of sports equipment and find surface area and/or volume A. sphere - basketball, bowling ball, any ball, shot put B. ellipse - football, head on badminton racquet C. triangle - shuffleboard, bowling pin setting D. rectangle - backboard for college and professional basketball, football field, most playing cards. E. cylinder - baton for track, vaulting pole F. circles - basketball hoop, rings for deck tennis, shot put and discus competition boundary G. octagon - handle on badminton racquet	MICROFILE: Chronicle Guidance CAREER KIT - Largo
	Review 1-to-1 correspondence concept	4. Discuss the 1-to-1 correspondence in relation to man-to-man defense in basketball, two high school or college wrestling squads are an example of a 1-to-1 correspondence. 5. Discuss archery targets and scoring and how the concept of add numbers is involved. Starting from the outside, the numbers are 1, 3, 5, 7, and 9 points respectively.	

Subject Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics in sports and athletics	Learn how mathematics applies to the recreational life of a person by the concept of addition in keeping score for bowling.	6. Discuss addition and how it related to bowling scores. Allow students to play the bowling game with cubes and a score sheet. This will help to correlate mathematics, recreation, and careers in an activity of interest to most students.	
	Expose students to jobs related to sports but requiring various mathematics skills.	7. Discuss careers and jobs that are related to sports and require varying degrees of competency in mathematics: A. sports reporter B. sports broadcaster C. sports editor D. coach E. professional athlete F. recreation director G. sporting goods salesman H. owner or manager of recreation establishment	Resource people from the community

Subject Mathematics

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Computer Science	Have students become aware of uses for computers, skills needed, and career opportunities in the computer field.	1. Read, work and discuss pages 57-60 in textbook and page 283 in textbook. 2. Work some problems with flow charts. 3. Discuss binary system and how it relates to computers 4. Have resource person speak on computer programming. 5. Take a field trip to IBM, or the vocational school cr to a bank downtown where students can observe a computer in use.	SPEAKERS: 1. IBM Corporation 2. Bank 3. Vocational School-data processing FILMS: 1. A Computer Glossary #3305 IBM Corporation Modern Talking Pict. 2. Computer Revolution part I Union Carbide #3098 Modern Talking Computer Revolution part II Union Carbide #3098 Modern Talking Pictures FILMSTRIPS: 1. Career in the Computer Field Popular Science (IPC - AV #101131) 2. How a Computer Solves a Problem Popular Science (IPC - AV #102411)

Subject Algebra

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Computer Science			PAMPLETS: Flight and Computers and Careers in Programming IBM Corporation 1968 Copyright Should you gc into Electronic Computer Programming (New York Life) CAREER KIT - Largo MICROFILE: Chronicle Guidance BOOKLET: The Computer in Your Life by Christobel M. Cordell J. Weston Walsch POSTER: Opportunities Relating to Math Computers in Occupations

Subject Algebra

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Engineering	Provide information which will acquaint the students with opportunities available and skills needed in a career of engineering. Allow students to explore job opportunities using the skills and interests of algebra and mathematics.	1. Discuss page 157 in the algebra textbook. 2. Show filmstrips of films according to the needs or interests of the class. 3. Discuss skills, aptitudes and interests necessary for a career in engineering. 4. Have interested students give oral reports on different phases of engineering after reading the pamphlets and doing some research in the library.	FILMSTRIPS: 1. Engineering Technology *Sound (IPC - AV #101137) Guidance Associates 2. Architecture and Your Life (IPC - AV #103599) 3. Civil Engineering Technicians The Nation's Builders Series by Bowmar (IML) 4. Architectural Draftsman - Bowmar (IML) PAMPHLETS: Should You Be A Manufacturing Engineer? (New York Life) Should You Be An Electronic Engineer? (New York Life) CAREER KIT - Largo MICROFILE: Chronicle Guidance

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics in Science	To provide information to help students understand that mathematics in a basic skill for science careers and scientific work.	1. Read and discuss page 201 in the textbook. 2. Show and discuss one or more filmstrips or films on the use of math in science and technology. 3. Have interested students do research and give oral reports on one or more areas of science and how mathematics skills are used.	FILMSTRIPS: 1. Careers in Science-Looking Ahead to Mathematics (IPC - AV #101167) N.Y State Teachers 2. Analyzing Scientific Data (IPC - AV #103431) 3. People Who Organize Facts - Overview (IML) Guidance Assoc. POSTER: Opportunities Relating To Math #1 Math in Science and Technology PAMPHLET: Should You Be A Physicist? (New York Life) FILM: The Torture Testers #4187 Underwriter's Lab-Modern Talking

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics in Science			FILM: continued Verniers #4B0224 Univ. of Minn. 20 min - rental $3.85 CAREER KIT - Largo MICROFILE: Chronicle Guidance

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics related to communications electronics, and airplanes	Expose students to information about mathematics skills used in air travel and electronics. Allow students to explore career opportunities that exist in these areas.	1. Read and discuss page 243 in the algebra textbook. 2. Show filmstrips and discuss. 3. Have oral reports from interested students who have done some research. 4. Invite a resource person to speak to the class.	FILMSTRIPS: 1. The Air Age (IPC - AV #103594) Life filmstrip 2. Air Controllers (IML) Man Has Wings Bowmar #B4017 3. Pilot Flight Instructor (IML) Man Has Wings Bowmar #B4017 4. Overview (IML) Age of Electronics - Bowmar #B4016 SPEAKERS: 1. private or commercial pilot 2. air traffic controller 3. meteorologist 4. bell telephone CAREER KIT - Largo MICROFILE: Chronicle Guidance

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics used by architects and draftsmen	Help students understand that math skills are related to the fields of architecture and drafting. Allow the students to explore career opportunities in the fields of architecture and drafting.	1. Read and discuss pages 323, 328, and 517 in the algebra textbook. 2. Have movie and/or filmstrips on architects and draftsmen. 3. Do scale drawing of a floor plan for a house, school, church, or place of business in the community. 4. Have oral reports from students who are interested and did research on careers and opportunities in architecture and drafting. 5. Have a resource person speak to the class.	FILMSTRIPS: 1. Architecture and Your Life (IPC - AV #103599) 2. Architectural Draftsmen (IML) The Nation's Builders Bowmar PAMPHLETS: 1. Should you be a Draftsman? (New York Life) 2. Should you be an Architect? (New York Life) FILM: Principles of Scale Drawing #2B0156 11 min - rental $2.00 Univ. of Minnesota CAREER KIT - Largo MICROFILE: Chronicle Guidance

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics in medicine	Help students to become aware that mathematics is a very vital tool in preparing for any career in medicine-to name a few: A. nursing B. therapy C. doctors D. pharmacy E. veterinarians F. others	1. Discussion of page 345 in the algebra textbook. 2. Film or filmstrip on medical careers. 3. Oral reports from teacher and/or students who are interested in medical careers. 4. Invite the school nurse to speak to the students on opportunities and training needed for careers in medicine.	FILMSTRIPS: Physical Optics (IPC - AV #103482) Popular Science Overview-Compassion For People (IML) Bowmar #B4015 PAMPHLETS: Should you be a Dietician? (New York Life) Should you be a Nurse? (New York Life) FILMS: Horizons Unlimited #3033 American Medical Association Modern Talking Pict.

Subject Algebra

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Graphs and charts	Learn that graphs and graphing play an important part in many phases of our society. Learn techniques of reading and drawing graphs.	1. Discuss page 407 in the algebra textbook. 2. Assemble a collection of graphs from newspapers and magazines: A. circle graphs B. bar graphs C. line graphs D. picture graphs 3. Relate graphs to chapter 10 in the algebra textbook, pages 355-413. 4. Have a bulletin board consisting of graphs and charts.	MAGAZINES NEWSPAPERS TEXTBOOKS FILMSTRIPS: 1. Graphic Inequalities - Two Variables (IPC - AV #102355) 2. Graphs of Inequalities - one variable (IPC - AV #102356) 3. Graphs (IPC - AV #102390) 4. Graphing Equations (IPC - AV #102397) 5. Graphs Solve Problems (IPC - AV #102410)

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mathematics requirements of foresters	Expose students to information about requirements for entering a course in forestry and the part that mathematics plays.	1. Discuss page 485 in the algebra textbook. 2. Oral reports by teacher or interested students who have done research on the job responsibilities and qualifications.	PAMPHLET: Should You Be A Forester? (New York Life) ADDITIONAL SOURCES OF INFORMATION: The Society of American Foresters 1010 Sixteenth St. NW Washington, D.C. 20036 American Forest Products 1816 N. Street, NW Washington, D.C. 20036 Forest Service U.S. Dept. of Agriculture Washington, D.C. 20250

Subject Algebra or Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Geometry in the building industry	Give the student experiences in application of geometry skills in occupationally oriented learning activities. To aid students in working with the basic constructions in geometry. To help the student tie in basic constructions of geometry in design concepts. To increase student awareness of reasons for taking geometry. Students learn to apply basic geometry skills: A. area of triangle B. area of circles C. area of rectangles D. scale drawings E. construction of basic figures	1. Have the class bring pictures of buildings and bridges with different shapes to put on the bulletin board. 2. Have a class discussion on the different shapes in geometry and how each shape is used in the design of buildings. 3. Have students work problems relating to the area of different parts of a house and house lot. 4. Have each student figure how much paint will be needed for each room. 5. Have students figure amount and cost of carpeting the house. 6. Have students design and draw a floor plan for the house. Include doors and dimensions for the walls. 7. Invite a resource person such as an architectural draftsman or contractor to speak to the class. 8. Have students plan a landscape design for the house lot. Flower gardens are usually laid out in circles, triangles, or rectangles. 9. Figure how many plants needed for each plot.	FILMSTRIPS: Scale Drawing (IPC - AV #102421) Areas (IPC - AV #102485) Architecture and Your Life (IPC - AV #103599) FILMS: Principles of Scale Drawing No. 2B0156 11 min - rental $2.00 Univ. of Minnesota Notes of a Triangle (IPC - AV #000009) National Film Board of Canada CAREER KIT - Largo MICROFILE: Chronicle Guidance SPEAKERS: architect surveyor park department planner

Subject Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Geometry in the building industry	Discuss building careers that use a number of geometry skills and geometric concepts: A. architect B. landscape architect C. draftsman D. contractor E. carpenter F. sheet metal worker G. brick mason H. plumber I. electrician J. electrical engineer K. civil engineer L. surveyor M. others	10. Invite resource person from the park department. 11. Have each student figure out how may bricks it would take to cover a certain area. 12. Have each student figure tile for the floor using tiles that are 9" x 9". 13. Have each student figure tile for the ceiling using tiles 12" x 12" and 2' x 2' and 2' x 4'. 14. Show slides of local park layout and landscaping. 15. See Appendix VI	PAMPHLETS: From New York Life: Should You Be An Architect? Should You Go Into Construction? Should You Be An Electronic Engineer? Should You Be a Mathematician?

Subject Geometry

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Indirect Measurement	Student should learn to apply mathematics skills and geometric concepts to practical problems. Students should learn to apply the concepts of: A. pythagorean theorem B. similar triangles C. ratio-proportion D. linear measurement E. estimation Students should be exposed to jobs or occupations that use these mathematics skills, such as: A. surveyor B. engineer C. forester D. navigator E. others	1. Measure the height of the flagpole indirectly: A. by the use of the pythagorean theorem B. by using ratio-proportion and the use of shadows C. use of similar triangles and ratio-proportion D. use of trigonometric functions (sine, cosine, tangent, etc.) Then compare the results of the four methods. 2. Measure the height of the school building by indirect methods: A. use of pythagorean theorem B. use of similar triangles and ratio-proportion C. measure how many bricks in a 36 inch or 48 inch length and estimate the height by counting the total number of bricks. Check and compare the results of the three methods. 3. Measure the height of a tree indirectly by using steps A, B, C, and D of activity #1. 4. Make a horizontal indirect measurement, for instance, the distance between two electric poles or between two street markers, etc. Use steps A, C, and D of activity #1. Check the results by measuring the distance with a steel tape. 5. Discuss these skills as they are related to the careers of: surveyor, engineer, forester, or navigator. 6. Interested students give oral reports on careers.	FILMSTRIPS: Indirect Measurement-Ratio and Tangent (IPC - AV #102443) Popular Science POSTERS: Trigonometry In Occupations Geometry in Occupation J. Weston Walsch PAMPHLETS: Should You Be A Forester? (New York Life) SPEAKERS: City surveyor or planning board

Subject Geometry

Grade Level 9

SELECTED REFERENCES

BOOKLETS

CAN I BE A MATHEMATICIAN?, Educational Relations Section, Public Relations Staff, General Motors Corporation, Detroit 2, Michigan 48202, Copyright 1965

MATHEMATICS AT WORK IN GENERAL MOTORS, Educational Relations Section, General Motors Corporation

MATH PROBLEMS FROM INDUSTRY, Community Affairs, Chrysler Corporation, P.O. Box 1919, Detroit 31, Michigan, Copyright 1956

OPPORTUNITIES IN MATHEMATICS, By Enid A. Delley, J. Weston Walsch Publisher, Portland, Maine, Copyright 1963

Posters from J. Weston Walsch

MATHEMATICS IN THE HOME, by David E. Newton, copyright 1970

OPPORTUNITIES RELATING TO MATH

PAMPHLETS

Flight and Computers and Careers in Programming, IBM Corporation, 1968

The Story of Checks, Federal Reserve Bank of New York, Public Information Department, 33 Liberty Street, New York, New York, 10045

Career Information Service, New York Life Insurance Company, Box 51, Madison Square Station, New York, New York, 10010

1. Should you be an accountant?
2. Should you be an actuary?
3. Should you be an architect?
4. Should you be a banker?
5. Should you go into business for yourself?
6. Should you seek a career in life insurance?
7. Should you go into the construction business?
8. Should you be a dietician?
9. Should you be a draftsman?
10. Should you be an electronic engineer?
11. Should you go into electronic computer programming?
12. Should you be a forester?
13. Should you be a manufacturing engineer?
14. Should you be a mathematician?
15. Should you be a physicist?
16. Should you be a salesman?

TEXTBOOKS

MATHEMATICS FOR DISTRIBUTIVE EDUCATION, by Louis D. Mason, J. Weston Walsch, Publisher, Portland, Maine 04104, Copyright 1968

MATH FOR TODAY AND TOMORROW, by Kaye A. Mach and Allan Larson, J. Weston Walsch, 1968

MODERN ALGEBRA - STRUCTURE AND METHOD, book I, Dolciani-Wooton, Houghton Mifflin Company, 1970

MODERN MATHEMATICS - GEOMETRY, Rosskopf, Sitomer, Lenchner, Silver Burdett Company, 1966

FILMS

A Computer Glossary, #3305 IBM Corporation, Modern Talking Picture Service
Auto Mechanic: It's For You, #3841 General Motors Corporation, Modern Talking Picture Service
Automobile in America, the, Hearst Metrotone News Inc., IPC #000562
Automotive Service, University of Minnesota, #2B0005
Building A House, University of Minnesota, #2B0007
Careers in The Building Trades, S.D. State University
Computer Revolution Part I, Union Carbide, #3097, Modern Talking Picture Service
Computer Revolution Part II, Union Carbide, #3098, Modern Talking Picture Service
Consumer Education: Installment Buying, University of Minnesota
Fred Meets A Bank, S.D. State University
Horizons Unlimited, American Medical Association, #3033, Modern Talking Picture Service
Notes on a Triangle, The National Board of Canada, IPC, #000009
Politics-High Cost of Conviction, IPC, #000016
Principles of Scale Drawing, University of Minnesota, #2B0156
The Torture Testers, Underwriters' Laboratory Inc. #4187, Modern Talking Picture Service
Verniers, University of Minnesota, #4B0224
You'll Earn It, CUNA Mutual Insurance Society, #3725, Modern Talking Picture Service

FILMSTRIPS

Age of Electronics, Overview - Bowmar - (IML)
Air Age - Life Filmstrip - (IPC #103594)
Air Controllers, Man Has Wings Series - Bowmar - (IML)
Aircraft Engine Mechanic, Man Has Wings Series - Bowmar - (IML)
Air Frame Mechanics, Man Has Wings Series - Bowmar - (IML)
Analyzing Scientific Data - Popular Science - (IPC #103431)
Architectural Draftsman, The Nation's Builders Series - Bowmar - (IML)
Architecture And Your Life - American Institute of Architects - (IPC #103599)
Areas - Society of Visual Education - (IPC #102485)
Automobile Insurance - Insurance Information Institute - (IML)
Automotive Researcher, People Who Organize Facts Series - Bowmar - (IML)
Bakery Forewoman, People Who Organize Facts Series - Bowmar - (IML)
Careers In Science, Looking Ahead To Mathematics - New York State University Teachers College -(IPC #101167)
Careers In The Computer Field - Popular Science Audio Visuals - (IPC #101131)
Civil Engineering Technicians, The Nation's Builders Series - Bowmar - (IML)
Commission Meaning and Application, Using and Understanding Numbers, Per Cents, and Percentage
Applications - Society for Visual Education - (IPC #102428)
Compassion For People Series, Overview - Bowmar - (IML)
Decorating Made Easy - Sears Roebuck and Company - (IPC #101756)
Engineering Technology - Guidance Associates - (IPC #101137)
Geometrical Optics - Popular Science - (IPC #103454)
Graphs - Society of Visual Education - (IPC #102390)
Graphs of Inequalities, One Variable - Popular Science - (IPC #102356)
Graphs Solve Problems - Popular Science - (IPC #102410)
Graphing Equations - McGraw Hill - (IPC #102397)
Graphing Inequalities, Two Variables - Popular Science - (IPC #102355)
How a Computer Solves a Problem - Popular Science - (IPC #102411)
Indirect Measurement, Tangent Ratio - Popular Science - (IPC #102443)
Insurance for the Home - Insurance Information Institute - (IML)
Insurance, Using and Understanding Numbers, Percent and Percentage Applications - Society of Visual
Education (IPC #102428)
People Who Organize Facts, Overview - Bowmar - (IML)
Physical Optics - Popular Science - (IPC #103482)
Pilot Flight Instruction, Man Has Wings Series - Bowmar - (IML)
Rights Angles In Three-Dimensional Figures - Popular Science - (IPC #102453)
Scale Drawing - McGraw Hill - (IPC #102421)
The Price of Credit - Guidance Associates - IML
Your Life of Work - Popular Science - (IPC #101163)

APPENDIX I

TAPES

Guidance Associates Tapes - Whittier Library

1. Your future as an automobile body repairman
2. Your future as an auto mechanic
3. Your future as a bank teller
4. Your future as a beauty culture (both sexes)
5. Your future as a commercial airline stewardess
6. Your future in data processing
7. Your future as a dental technician
8. Your future as a draftsman
9. Your future in a drugstore
10. Your future as a fireman

LIST OF ACCOUNTS

Richard Nixon

Nancy Sinatra

Harry Truman

Greasy Grimes Garage

Minnehaha County

N S P

Julie Andrews

Dwight Eisenhower

Hubert Humphrey

Lyndon Johnson

Robert Kennedy

Dean Martin

Northwestern Bell

Super Spender Grocery

United Heathen Church

Willy Bare Clothes

BEGINNING BALANCE FOR EACH INDIVIDUAL OR FIRM

Richard Nixon	$ 6,436.10
Nancy Sinatra	$ 1,624.83
Harry Truman	$ 846.65
Greasy Grimes Garage	$ 742.68
Minnehaha County	$ 38,450.00
N S P	$ 18,786.40
Julie Andrews	$ 2,245.18
Dwight Eisenhower	$ 958.48
Hubert Humphrey	$ 398.68
Lyndon Johnson	$ 238.15
Robert Kennedy	$ 98.14
Dean Martin	$ 10,960.11
Northwestern Bell	$ 8,900.00
Super Spender Grocery	$ 3,946.97
United Heather Church	$ 168.37
Willy Bare Clothes	$ 426.86

Students should arrange the accounts in order from the transparency. This will give them a limited experience in alphabetizing as well as an experience with addition and subtraction of decimals.

DEP	CHECKS	BAL

DEP	CHECKS	BAL

DEP	CHECKS	BAL

DEP	CHECKS	BAL

DEP	CHECKS	BAL

DEP	CHECKS	BAL

Deposit Slip

$125.00

ROBERT KENNEDY

TO: NORTHWESTERN BELL

$119.24

From: WILLY BARE CLOTHES

To: UNITED HEATHEN CHURCH

$5.00

From: DEAN MARTIN

To: GREASY GRIMES GARAGE

$5.91

From: RICHARD NIXON

DEPOSIT SLIP

$54.86

JULIE ANDREWS

DEPOSIT SLIP

$23.48

RICHARD NIXON

To: GREASY GRIMES GARAGE

$264.38

From: N S P

To: SUPENDER GROCERY

$18.47

From: GREASY GRIMES GARAGE

To: NORTHWESTERN BELL

$83.46

From: MINNEHAHA COUNTY

To: WILLY BARE CLOTHES

$18.54

From: DWIGHT EISENHOWER

DEPOSIT SLIP

$159.45

HUBERT HUMPHREY

To: SUPER SPENDER GROCERY

$9.13

From: DEAN MARTIN

To: N S P

$71.95

From: WILLY BARE CLOTHES

To: GREASY GRIMES GARAGE

$1.26

From: LYNDON B. JOHNSON

To: UNITED HEATHEN CHURCH

$25.00

From: JULIE ANDREWS

DEPOSIT SLIP

$22.56

NANCY SINATRA

TO: NORTHWESTERN BELL
$6.22
FROM: NANCY SINATRA

TO: SUPER SPENDER GROCERY
$9.87
FROM: DEAN MARTIN

TO: WILLY BARE CLOTHES
$ 8.61
FROM: JULIE ANDREWS

TO: GREASY GRIMES GARBAGE
$3.97
From; ROBERT KENNEDY

TO: UNITED HEATHREN CHURCH
$21.00
FROM: RICHARD NIXON

TO: N S P
$ 14.89
FROM: LYNDON B. JOHNSON

TO: MINNEHAHA COUNTRY
$261.80
FROM: HUBERT HUMPHREY

TO: N S P
$ 11.19
FROM: HARRY TRUMAN

TO: SUPER SPENDER GROCERY
$ 11.10
FROM: JULIE ANDREWS

TO: NORTHWESTERN BELL
$ 197.42
FROM: N S P

TO: WILLY BARE CLOTHES
$ 41.25
FROM: HARRY TRUMAN

TO: NORTHWESTERN BELL
$ 25.61
FROM: UNITED HEATHER CHURCH

TO: MINNEHAHA COUNTY
$124.51
FROM: ROBERT KENNEDY

TO: N S P
$ 45.16
FROM: GREASY GRIMES GARBAGE

TO: NORTHWESTERN BELL
$ 36.17
FROM: SUPER SPENDER GROCERY

TO: UNITED HEATHREN CHURCH
$20.00
FROM: HUBERT HUMPHREY

To: United Heathen Church
$16.00
From: Harry Truman

To: Super Spender Grocery
$4.81
From: Harry Truman

To: Greasy Grimes Garbage
$5.16
From: Dwight Eisenhower

To: Willy Pore Clothes
To:
$61.85
From: Nancy Sinatra

To: Deposit Slip
$123.43
From: Lyndon Johnson

To: N S P
$26.11
From: Hubert Humphrey

To: Willy Bare Clothes
$3.18
From: Dean Martin

To: Minnehaha County
$64.43
From: Dean Martin

To: United Heathen Church
$19.00
From: Robert Kennedy

To: Deposit Slip
$59.21
From: Julie Andrews

To: N S P
$59.16
From: Super Spender Grocery

To: Northwestern Bell
$10.12
From: Greasy Grimes Garbage

To: Greasy Grimes Grocery
$112.69
From: Northwestern Bell

To: Supper Spender Grocery
$7.82
From: Lyndon Johnson

To: Deposit Slip
$76.50
From: Robert Kennedy

To: Willy Bare Clothes
$74.25
From: Julie Andrews

BEST COPY AVAILABLE

To : [illegible]

$ 3.[illegible]

From : JULIE ANDREWS

DEPOSIT SLIP

$ 37.53

NANCY SINATRA

To : UNITED HEATHEN CHURCH

$ 15.00

From : DWIGHT EISENHOWER

To : GREASY GRIMES GARAGE

$ 2.85

From : RICHARD NIXON

To : NORTHWESTERN BELL

$ 23.90

From : ROBERT KENNEDY

To : SUPER SPENDER GROCERY

$ 27.85

From : ROBERT KENNEDY

To : N S P

$ [illegible]

From : NORTHWESTERN BELL

To : SUPER SPENDER GROCERY

$ 3.84

From : JULIE ANDREWS

To : N S P

$ [illegible]

From : UNITED HEATHEN CHURCH

To : MINNEHAHA COUNTY

$ 72.55

From : NANCY SINATRA

To : N S P

$ 56.85

From : RICHARD NIXON

To : greasy grimes garage

$ 7.48

From : HUBERT HUMPHREY

To : SUPER SPENDER GROCERY

$ 7.22

From : LYNDON JOHNSON

To : N S P

$ 57.55

From : MINNEHAHA COUNTY

DEPOSIT SLIP

$ 33.90

DWIGHT EISENHOWER

DEPOSIT SLIP

$ 410.[illegible]

HARRY TRUMAN

No. ________

MITCHELL, S. DAK. ________________ 19 ____

78-30
914

Pay to the order of ________________________________ $ ________

____ DOLLARS

[________________]

Soring code number

For ________________ ________________________

No. ________

MITCHELL, S. DAK. ________________ 19 ____

78-30
914

Pay to the order of ________________________________ $ ________

____ DOLLARS

[________________]

Soring Code number

For ________________ ________________________

No. ________

MITCHELL, S. DAK. ________________ 19 ____

78-30
914

Pay to the order of ________________________________ $ ________

____ DOLLARS

[________________]

Soring code number

For ________________ ________________________

SPELLING LIST

1. THREE
2. FOUR
3. EIGHT
4. SEVENTY
5. FORTY
6. NINE
7. FIVE
8. SIX-HUNDRED
9. NINETY-ONE
10. FIFTY
11. JANUARY
12. FEBRUARY
13. SEPTEMBER
14. TWO
15. ZERO
16. THIRTY
17. SEVEN
18. ELEVEN
19. AUGUST
20. TWENTY

BANKING PROJECT Name ____________________

No. ________

MITCHELL, S. DAK. ______________ 19____

78-30
914

Pay to the
order of ______________________________ $__________

______________________________ DOLLARS

[______________]
Soring code number

For ______________ ______________

In the above check blank write a check with a sorting code number of 123-478-908. This check was written during the second month of the year and the twenty-ninth day of the month. It was written to the FLAKEY WAKEY POT COMPANY for 300 pounds of grass. The check written for $712.59 was signed by Pothead Smith. The next check in Pothead's checkbook is check No. 874. Pothead's last check was written on January 28 of this year. He has a current balance in his checkbook of $ 934.32. The above problem has eight correct answers.

9. In the above probelm, how much would Pothead's balance be after he had written the check to the FLAKEY WAKEY POT COMPANY? 9. __________

10. If FLAKEY WAKEY had a balance of $45,712.78, what was their balance after they deposited the check from Pothead Smith? 10. __________

11. If Pothead Smith had a balance of $54.34, and he made a deposit of $623.45 and had a service charge of $4.13 and then deposited $79.00, what was his balance? 11. __________

12. Pothead's brother JUNKY SMITH had an account in the same bank. His starting balance was $48.50. Give the amount of the balance after each of the following transactions.

12. check $46.32 balance __________
13. deposit $102.15 balance __________
14. deposit $24.73 balance __________
15. check $121.19 balance __________
16. check $8.77 balance __________

WRITE IN WORDS:

17. 98 17. ____________________
18. 47 18. ____________________
19. 54 19. ____________________
20. 79 20. ____________________

APPENDIX II

BANQUET MENU

HAM	89¢ per pound	6 ounces per person
CHICKEN	41¢ per pound	8 ounces per person
TURKEY	55¢ per pound	8 ounces per person
SHRIMP	$1.23 per pound	6 ounces per person
POTATOES	4.5¢ per pound	8 ounces per person
CORN	17¢ per pound	4 ounces per person
PEAS	23¢ per pound	4 ounces per person
BEANS	16¢ per pound	4 ounces per person
MIXED VEGETABLES	19¢ per pound	4 ounces per person
CARROTS	23¢ per pound	4 ounces per person
PICKLES	37¢ per quart	
OLIVES	79¢ for 1 quart and 4 ounces	
CELERY	35¢ for 1 bunch	
ROLLS	45¢ per dozen	2 rolls per person
BREAD	41¢ per loaf (24 slices) per loaf	2 slices per person
ICE CREAM	40¢ per quart	4 ounces per person
PIE	89¢ per pie	6 pieces per pie
JELLO	30¢ per quart	8 ounces per person
JELLO-SALAD	price of jello plus 27¢ per can of fruit cocktail	
TOSSED SALAD	lettuce 15¢ per pound and dressing 39¢ for 8 ounce bottle	
COFFEE	$1.75 for a two pound can	
TEA	28¢ for all of the tea	
MILK	65¢ per half gallon	8 ounces per milk drinker

CORRECTED BY ____________

NAME ____________

B A N Q U E T P R O J E C T

	FOOD	AMOUNT PER PERSON	AMOUNT FOR 200 PEOPLE	COST PER PERSON	COST FOR 200 PEOPLE
MEAT					
POTATOES					
VEGETABLE					
BREAD					
RELISH		X		X	
RELISH		X		X	
SALAD					
SALAD		X		X	
DESSERT					
TEA		X		X	
MILK					
COFFEE		X		X	

BANQUET PROJECT TEST--------Do not write on this test copy

1. If you plan a banquet and give each person 7 oz. of buffalot meat, how many ounces would you need for 275 people?

2. How many pounds of sirloin steak would we need if we gave each person 5 ounces and we had 1,024 people at the Governor's Inaugural Banquet?

3. Meat costs 40¢ per pound. If we give each person 6 oz., what would be the cost for each person?

4. If we need 1,244 lbs. of meat to feed 300 people and it costs 89¢ per pound, how much would it cost for meat for 300 people?

5. There are 24 slices of bread in a loaf. Wh have 204 people. Each person gets 2 slices. How many loaves of bread do we need to buy?

6. We give each person 2 rolls. If we have 75 people, how many dozen rolls do we need?

7. We need 384 rolls. If rolls cost 40¢ per dozen, how much will they cost?

8. We have 12 one-half gallon containers of ice cream. If we give each person 4 oz. of ice cream, how many people can we feed?

9. We cut each pie into 8 pieces. If we have 424 people, how many pies do we need?

10. We spent $24.38 for olives, $32.75 for pickles, $12.90 for celery, $61.20 for salad dressing, 22¢ for tea, $1.25 for coffee. How much was the total for the above items?

11. Meat costs 40¢ per pound. If we paid $128.00 for meat, and we give each person 6 oz., how many people did we buy meat for?

12. Our total expenses for our meal were $223.56. Wh have 138 people. We want a profit of 13¢ on each person. How much must we charge per ticket?

BANQUET PROJECT NAME

SHOW YOUR WORK IN THE SQUARE

1.	5.	9.
2.	6.	10.
3.	7.	11.
4.	8.	12.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

APPENDIX III

4 points DO NOT WRITE ON THIS SHEET 1

__________________________brings in a 1966 Ford with 289 engine. Odometer reading is 91472. He needs a bettery cable installed and a new windshield wiper installed. The labor rate is $8.00 per hour. How much will it cost?

4 points DO NOT WRITE ON THIS SHEET 2

Brings in a 1970 Chrysler with odometer 49459. It needs new shocks on front and rear. The labor rate is $7.00 per hour. What should you charge?

4 points DO NOT WRITE ON THIS SHEET 3

________________________brought in a car that needed a fan belt. a windshield wiper and a sealed beam. It is a 1965 Mercury with odometer 58362. Labor costs $6.25 per hour. What is the charge?

4 points DO NOT WRITE ON THIS SHEET 4

________________________bought some anti-freeze at a Lewis Drug sale. She brought it to you for installation. It was for a 1956 CHEVROLET pick-up. The odometer reading was 25473. What should you charge for draining and re-filling the anti-freeze? Hourly rate is $8.00 per hour.

4 points DO NOT WRITE ON THIS SHEET 5

____________________________ brought in his car for a safety inspection. He needs it fixed to pass inspection. It is a 1960 Chevrolet Impala with a 283 cubic inch engine. The odometer reading is 84632.

When you inspect the car you find it needs: a new muffler, a new tail pipe, a new voltage regulator, and a brake adjustment. Find the total cost of repairing this automobile including parts and labor. This garage charges $7.50 per hour.

4 points DO NOT WRITE ON THIS SHEET 6

Brought in a 1970 Datsun. It needs a new battery which costs $18.75. He also needs the transmission drained and refilled and a sealed beam replaced. The hourly rate is $7.00 for labor. How much is the bill?

6 points

________________________brings in a car that needs a fan belt and a coil. It is a 1970 Cadillac with odometer reading of 37,486. It is an 8-cylinder engine and the labor rate is $6.75 per hour.

6 points DO NOT WRITE ON THIS SHEET 8

Brought in a 1958 EDSEL for transmision repair. The odometer reading is 29640. You need to drain and refill the transmission and remove and replace it. Your charge for sub-let repair is $49.73. Your hourly rate for labor is $8.00. How much would you charge?

6 points DO NOT WRITE ON THIS SHEET 9

Brought in a 1969 Oldsmobile with odometer 70060. It needs new ball joints, upper and lower, a new wheel bearing on the left wheel, and a wheel alignment. Labor rate is $8.50 per hour.

6 points DO NOT WRITE ON THIS SHEET 10

Brings in a 1967 Rambler V-8 with a 343 engine. Odometer reads 68444. He needs a water pump. To replace the water pump you need to drain and refill anti-freeze. You need 3 gallons and 1 quart ($.99 per gallon and .30 per quart). He also needs a starter replaced. What should he pay if the labor rate is $9.00 per hour?

8 points DO NOT WRITE ON THIS SHEET 11

Brought in a 1964 Fairlane with a 6-cylinder engine. It needs a starter, generator, fan belt and spark plugs replaced. It also needs a signal flasher replaced. He needs a new water pump but brought an old one from home. All you charge for is labor to install it. What is the bill if the labor charge is $9.25 per hour?

8 points DO NOT WRITE ON THIS SHEET 12

______________________brought in a 1962 Pontiac Bonneville with a single exhaust, V-8 engine. He needs a new crossover pipe and a new muffler. He also needs 3 new exhaust gaskets. Including a new dimmer switch, how much would the bill be? Labor is charged at $7.75 per hour.

8 points DO NOT WRITE ON THIS SHEET 13

______________________brought in a 1971 Buick with an 8-cylinder engine and air conditioning. He needed new spark plugs and a dwell adjustment. He also needs new brake lining in the rear wheels. You then need to adjust the brakes and check the fluid. If the hourly wage is $8.50, what will it cost if he needs to turn down one brake drum?

8 points DO NOT WRITE ON THIS SHEET 14

Hit a pheasant. It burned out a sealed beam, and when it came over the hood, it broke off the radio antenna. What is the repair bill if the hourly rate is $6.00 per hour. The insurance company paid for the antenna but will not pay for the sealed beam. How much would you charge each?

10 points DO NOT WRITE ON THIS SHEET 15

Brought in a 1971 Lincoln with olometer reader 16414. It has an 8-cylinder, 429 engine. It needs new spark plugs.

It also needs new brake linings in front and rear. It needs a new brake light switch and a brake adjustment. He needs a new wheel bearing on the left front wheel. Including a battery charge, what would the cost of this job be if the hourly rate is $10.50per hour?

10 points DO NOT WRITE ON THIS SHEET 16

Brought a 1965 Ford in for a winter tune-up. It has a 6-cylinder, 240 engine. The odometer reading is 78407. It needs new plugs, new points, new coil, adjust choke, adjust dwell and timing, drain and refill anti-freeze (2 gallons and 2 quarts at $1.39 per gallon and $.49 per quart), and replace a windshield wiper assembly. Labor rate is $8.25 per hour.

10 points DO NOT WRITE ON THIS SHEET 17

Car did not start on Sunday morning when they were going to church. The starter was bad and needed replacement. They needed a new battery and a battery cable. By starting the car the station attendant hooked the cables on wrong and burned out the alternator. We need to replace the fan belt and adjust the automatic choke. The car is a 1968 Plymouth Fury with 328 engine. Odometer reading is 68714. All work done at this garage on Sunday is charged time and a half labor. The hourly rate is $9.50 an hour. What is the cost of fixing this car including parts and labor? A battery for this car is $23.50.

NAME		MAKE	LICENSE NUMBER	MECHANIC
ADDRESS		YEAR	ODOMETER READING	DATE

PARTS					LABOR		
PART NUMBER	QTY	PRICE	DESCRIPTION	TOTAL	HOURS	DESCRIPTION	
						TOTAL LABOR	
						SUB-LET LABOR	
						TOTAL PARTS	
						SUB-TOTAL	
						TAX	
			TOTAL PARTS			TOTAL HOURS	TOTAL DUE

LABOR TIME CHART

Alternator		3/4	.75
Anti-freeze - drain and refill		3/4	.75
Ball joints		3 1/4	3.25
Battery replacement		1/4	.25
Battery cable		3/10	.3
Battery charge		3/4	.75
Brake adjustment and check fluid		5/8	.62
Brake drum - turn down		1/2	.5
Brake light switch		1/5	.2
Brake lining	front only	1 3/4	1.75
	rear only	2 1/2	2.5
Choke, automatic adjustment		1/4	.25
Coil		1/4	.25
Dimmer switch		1/2	.5
Dwell adjustment and timing-	Ford Corp.	1/2	.5
	General Motors	1/4	.25
	Chrysler Corp.	1/5	.2
Exhaust gasket replacement (each)		1/5	.2
Exhaust pipes:	crossover pipe	1 1/4	1.25
	tail pipe	1/2	.5
Fan Belt (No charge along with new generator, new water pump or alternator.)		1/6	.17
Generator remove and replace		1/3	.33
Muffler		3/4	.75
Points - remove and replace		3/8	.375
Radio antenna		7/10	.7
Sealed beam replacement		1/2	.5
Shocks - front and rear		1 1/5	1.2
Signal flasher replacement		1/10	.1
Spark plugs	6 cylinder	1/6	.17
	8 cylinder	1/3	.33
	8 cylinder with air conditioning	2/3	.67
Starter	6 cylinder	7/8	.875
	8 cylinder	1 1/5	1.2
Transmission drain and refill		2/3	.67
Transmission (repair)		sublet	
Transmission - remove and replace		5 3/4	5.75
Voltage regulator		1/2	.5
Water pump		1 1/2	1.5
Wheel alignment		1 3/10	1.3
Wheel Bearing - front - each		1/2	.5
Windshield wiper assembly		1/10	.1

PARTS LIST *FOR TEST*

Alternator		$28.00
Anti-Freeze	Gal. - $1.49	Qt. - 39¢
Ball Joints	Upper	$ 7.05
	Lower	$ 9.98
Battery	Type A	$24.75
	Type B	$28.25
	Type C	$32.45
Battery Cable		$ 1.89
Brake Light Switch		$ 3.20
Brake Lining and Shoes	Front Wheels	$ 4.75 each
	Rear Wheels	$ 3.98 each
Coil		$ 7.22
Dimmer Switch		$ 3.30
Exhaust Gaskets		22¢
Exhaust Pipes:	Cross over	$ 9.50
	Tail	$11.30
Fan Belt		$ 3.46
Generator		$22.90
Muffler	Glass-Pack	$ 8.99
	Lifetime-Silent	$13.49
Points		$ 2.38
Radio Antenna		$ 6.10
Sealed Beam		$ 2.55
Shocks	Front	$ 4.65 each
	Rear	$ 4.25 each
Signal Flasher		$ 2.19
Spark Plugs	Regular	89¢ each
	Resistor	$ 1.22 each
Starter	8 - cylinder	$33.99
	6 - cylinder	$26.99
Transmission fluid		39¢ quart
Voltage Regulator		$ 7.49
Water Pump		$18.95
Wheel Bearing (Front)	Inner	$ 6.90
	Outer	$ 4.60
Windshield Wiper		$ 2.39

I. Buick - 8 cylinder

PARTS:
Battery cable, dimmer switch, fan belt
LABOR:
Replace battery cable, replace dimmer switch, replace fan belt
RATE:
$6.00 per hour

II. Plymouth - 8 cylinder - air conditioning

PARTS:
Spark plugs (resistor), points, battery (Type B)
LABOR:
Replace spark plugs, replace points, replace battery, adjust timing and dwell, adjust automatic choke.
RATE:
$8.50 per hour

III. Chevrolet - 6 cylinder - air conditioning

PARTS:
2 upper ball joints, two lower ball joints, shocks
LABOR:
Replace ball joints, replace shocks (2 front, 2 rear), wheel alignment
RATE:
$7.50 per hour

IV. Ford - 8 cylinder - air conditioning

PARTS:
Generator, voltage regulator, coil
LABOR:
Replace generator, replace voltage regulator, charge battery, replace coil
RATE:
$5.00 per hour

V. Pontiac - 8 cylinder

PARTS:
Starter, muffler (lifetime silent), tail pipe, 2 exhaust gaskets.
LABOR:
Replace starter, replace muffler, replace tail pipe, replace exhaust gaskets.
RATES:
$9.00 per hour.

VI. Cadillac - 8 cylinder

PARTS:
Sealed beam, signal flasher, radio antenna, spark plugs (regular).
LABOR:
Replace sealed beam, replace signal flasher, replace radio antenna, replace spark plugs, adjust automatic choke.
RATE:
$10.00 per hour.

VII. Mercury - 8 cylinder

PARTS:
Anti-freeze - 2 gallons and 2 quarts, transmission fluid - 5 quarts.
LABOR:
Drain and refill anti-freeze, remove and replace transmission, sublet labor to repair transmission $79.00 and sublet labor to repair radiator $12.00.
RATE:
$7.00 per hour.

VIII. Dodge - 6 cylinder - air conditioning

PARTS:
Brake light switch, two brake shoes for front wheels, two brake shoes for rear wheels, 1 inner wheel bearing, 1 outer wheel bearing.
LABOR:
Replace brake light switch, replace brake lining, replace wheel bearing.
RATE:
$8.25 per hour.

EXTRA CREDIT

IX. Chrysler - 8 cylinder

PARTS:
Water pump, fan belt, windshield wiper assembly
LABOR:
Replace water pump and windshield assembly
RATE:
$6.50 per hour regularly, but this was on a holiday so you charge time-and-a-half.

X. Chevrolet - 6 cylinder

PARTS:
Battery (Type A), muffler (glass pack), starter, 3 quarts transmission oil.
LABOR:
Replace battery, replace muffler, replace starter.
RATE:
$7.77 per hour. (No tax).

EXTRA CREDIT

XI. Imperial - 8 cylinder - air conditioning

PARTS:

Battery (Type C), alternator, fan belt, 3 gallons anti-freeze, 8 spark plugs (resistor), 4 exhaust gaskets.

LABOR:

Replace battery and replace alternator.

RATE:

Time-and-a-half. Regular rate of $8.40 per hour.

XII. Datsun - 4 cylinder

PARTS:

Windshield wiper assembly, two front shocks, one signal flasher, one sealed beam.

LABOR:

Adjust automatic choke, adjust brakes and check fluid remove and replace transmission, sublet labor $178.00

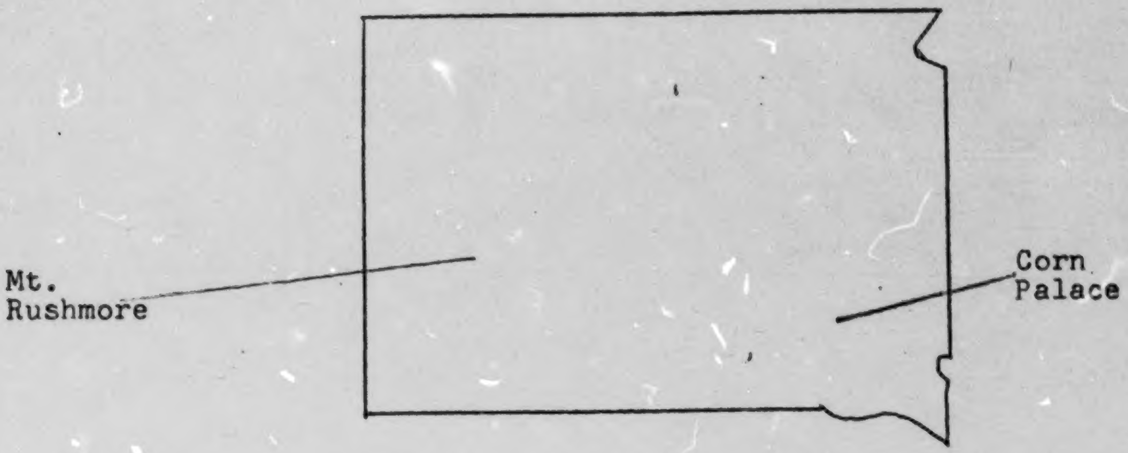
RATE:

$5.55 per hour (no tax)

APPENDIX IV

BULLETIN BOARD

Get booklet on South Dakota from tourist information booth, and put pictures of places to visit with map in center to yarn leading to places on map.


Mt. Rushmore
Corn Palace

POPULATION

1. What is the 1970 census of S. Dak.?

2. According to the information given, what is the smallest city in S. Dak.?

3. In what part (direction) of the state is this city found?

4. How much larger is Watertown than Yankton?

5. What is the population of the largest city in Minnehaha County?

6. What is the total population of the 4 towns between Murdo and Reliance?

7. Which of the following is the largest? Dell Rapids, Lemmon, or Wagner?

8. How many more people live in Mitchell than Faulkton?

9. What is the population of the largest city west of the Missouri River?

10. What is th total population of Pierre and Ft. Pierre?

11. What cities have population over 25,000?

12? What per cent of South Dakota's total population live in Sioux Falls?

MILES

Compute the miles for the following trips using the state map:

	Highway	Miles
Yankton to Platte	50	
Britton to Miller	10 and 45	
Bison to McLaughlin	20 and 63	
Northern Border to Southern Border	281	

1. Using a ruler, how many miles (as the birds fly) from Kadoka to Pine Ridge? ______
2. From Gregory to Volga ______
3. From Belle Fourche to Aberdeen? ______

Use the Black Hills map on the back:

1. With a ruler calculate the air miles from Deadwood to Keystone. ______
2. Do the same for the distance from Edgemont to Hill City. ______
3. By traveling on Highway 16, how many miles from Rapid City to Custer? ______
4. How many miles from New Castle, Wyoming to Lead, S. Dak. on Highway 85? ______

AUTOMOBILE MILEAGE

1. What is the distance traveled by an automobile under each of the following sets of conditions?

Rate	number of hours	distance in miles
a. 40 mph	5	
b. 65 mph	4 1/2	
c. 47 mph		282

2. How many gallons of gasoline were used during each of the following trips?

Distance traveled	Miles per gallon	Number of gallons
a. 4,000	9	
b. 21,900	17	
c. 26,500		1104

3. Traveling on Interstate 90, how many miles from Sioux Falls to Rapid City?

4. If I drive to Rapid City and back, plus 85 miles while there, how many total miles did I travel?

5. Assuming my car gets 17.5 miles per gallon, how many gallons of gas will I use?

6. The gas I bought cost an average of 31.9 ¢ per gallon. How much did I spend for gas?

QUESTIONS ABOUT THE DIFFERENT INFORMATION THAT CAN BE FOUND ON A MAP

1-10 on picture side
11-16 on main map

1. What is the name of the two historical trails for exploring thrills? ________________

   ____

2. What does this sign mean ▷ ? ________________

3. Are there any picnic or campgrounds between Deadwood and Sturgis? ________________

4. Does Custer have a Ranger station? ________________

5. Is there a fish hatchery near Hot Springs? ________________

6. What is the Highway Patrol's District Office telephone number in Sioux Falls? ________________

7. What is the name of the radio station in Mitchell? ________________

8. How many television channels does Rapid City have? ________________

9. What two Interstate highways go through S. Dak.? ________________

10. What is Richard Kneip's middle initial? ________________

11. How many Indian Reservations does S. Dak. have? ________________

12. Does Martin have an airport? ________________

13. Does the Old West Trail pass through Onida? ________________

14. Is Wood the County seat of Mellette County? ________________

15. What kind of a highway passes through Polo? ________________

16. What six states border S. Dak.?

    ____

17. What is the name of Rapid City golf course? ________________

18. If you are traveling west on I-90 at which town do you cross the time zone boundary? ________________

19. What do the two symbols at Roy Lake (20 miles west of Sisseton) represent? ________________

    ____

ADDITIONAL MATH PROBLEMS ON A TRIP

1. How much change from each of the traveler's checks indicated will a person receive after having paid for the cost of the meal and tipped the waiter 15% of that cost?

	Cost of Meal	Waiter's Tip	Total Cost	Size of Traveler's Check	Change
a.	$ 3.00			$10	
b.	12.50			20	
c.	26.40			50	
d.	15.00			20	

2. In each of the following exercises, a person spent the number of nights indicated at a motel. What will his total bill be for his stay at the motel? Include state tax.

	Cost per Night	Number of Nights	Total Motel Charge	State Tax Rate	State Tax	Total Charges Including Tax
a.	$ 9.00	2		2 %		
b.	$10.50	4		4 %		
c.	$16.50	10		5.5 %		
d.	$ 7.50	8		3 1/4%		

3. Mr. Spellman and his family stayed 10 days at the shore in a motel at a cost of $21.50 per day. The state sales tax rate where they spent the vacation is 3%. In traveling to the motel and returning to their home, they had to purchase gas four times at a cost of $5.25, $9.90, $5.35 and $5.65. What is the total amount they spent on gasoline and motel expenses?

____

4. Bill Spivak used his car to travel from his home in Omaha, Nebr. to the home of a friend in San Francisco, California - a distance of 1,725 miles. He planned to drive his car at an average rate of 60 miles per hour.
   a. How many hours should he plan on driving? Find your answer to the nearest hour. ______________
   b. If he starts driving early in the morning and drives for eight hours each day, how many days will he be traveling? Find your answer to the nearest day. ______________
   c. If he averages $9.50 per night as the cost for motel rooms and $7.75 per day for food, what will be the total cost for just these two expenses for the trip? In computing your answer include the cost of food for the last day, but not the motel cost. ______________

SOUTH DAKOTA MAP TEST

TRUE OR FALSE

_____1. The James River passes through Parkston.

_____2. Highway 14 going east through Brookings will take you to Mankato.

_____3. Hot Springs has more people than Spearfish.

_____4. Sisseton is north of Watertown.

_____5. Western Airlines has a flight through Pierre.

_____6. According to the Sioux Falls map, the Great Plains Zoo is north of 12th Street.

_____7. Sioux Falls has only four radio stations.

_____8. Mt. Rushmore is located southwest of Keystone.

_____9. The Great Lakes Area (water playground for Mid-America) traces the Missouri River through South Dakota.

____10. Dupree, Bowdle and Raymond all have roadside parks.

1. On the third day of his trip, Willie Mays put in a full 9½ hours of driving. He averaged 62 miles per hour.

__________a. How far did Willie travel that day?

__________b. If his car averages 18 miles to the gallon of gasoline, how many gallons did the car consume that day? Find your answer to the nearest gallon.

__________c. If gas cost him 34.9¢ per gallon, what was the total cost of gasoline for that day?

__________2. If Aberdeen, Rapid City and Sioux Falls are the 3 largest cities in S. Dak., what is the fourth?

__________3. What per cent of South Dakota's population is Indian if there are 28,000 living here?

__________4. How many more people live in Parkston than in Arlington?

__________5. Traveling on highway 18 from Martin to Gregory in a car that gets 12 miles to a gallon, would require how many gallons of gas?

__________6. Using a ruler and the scale of miles approximate the number of miles around South Dakota.

7. Vida Blue stayed at a motel in Hot Springs for a period of 5 nights at a cost of $17.50 per night.

__________ a. What was the cost of his lodging for the 5 nights?

__________ b. If the state tax rate was 4%, how much tax did Vida have to pay?

__________ c. How much change did Vida receive from his $100 bill?

III:__________ Begin this mathematical maze by finding the population difference between Northville and Badger. Multiply by the number of miles between Bowdle and Ipswich. Divide this by the number of Indian reservations in S. Dak. Now add the number of the Interstate Highway that rums east and west. Now multiply this number by the number of the NBC T.V. Channel in Lead. Finally subtract this number from the elevation of Huron.

APPENDIX V

Name ____________________ Date ______________

Buying the Family Automobile

The cost of an automobile is figured from a list price with the cost of extras (accessories) added. The list price of different models of one car are given in the table.

2 door	$1780	custom deluxe 2 door	$2750
4 door	1836	custom deluxe 4 door	2810
deluxe 2 door	2190	custom convertible	3350
deluxe 4 door	2240	custom station wagon	3470

The list price does not include the cost of the following extras;

heater	$ 86.40	seat covers	$22.85
radio	92.80	non-glare mirror	6.80
automatic drive	186.00	side mirror	9.70
undercoat	22.50	power brakes	83.20
back up lights	24.20	power steering	87.60

To find the total cost of the car he wants, the buyer decides on the list price of the model he selects and adds to this the cost of the extras he wishes.

Find the delivery prices of the cars in the following problems.

1. For his business, Mr. Howard wanted the 2 door with a heater. How much did his car cost? ____________________
2. The Waltons chose the deluxe 4 door for their family car. If they wanted a heater, radio, undercoat, and seat covers, what was the price of the car? ____________________
3. In buying a car for his wife Mr. Johnson selected a convertible with heater, radio, undercoat, power steering, power brakes, and automatic drive. What was the total cost of the car? ____________
4. A scout leader wanted a station wagon with power steering, automatic drive, side mirror, and heater. What did this car cost? ____________________
5. Mr. Granger purchased a custom deluxe 2 door with heater, radio, automatic drive, seat covers, and back up lights. Find the cost of the car? ____________________
6. For a second car the Martins purchased a 4 door with heater, radio, and automatic drive. Find the cost of the car? ____________________
7. Find the cost of the car you would like to buy including the accessories you choose? ____________________

Name ______________________________

THE DOWN PAYMENT AND BALANCE OWED WHEN PURCHASING A CAR

Some people who buy cars do not have enough money to pay for the car immediately. Often, used cars may be purchased with 1/4 the price as a down payment and the balance paid in monthly installments.

Find the down payment and unpaid balance on the following used cars:

		Down Payment	Balance
1. Plymouth	$479	$118.25	$354.75
1/4 x 473 = $118.25	$473.00 -118.25 $354.75		
2. Ford	$479	____________	____________
3. Mercury	$2487	____________	____________
4. Chevrolet	$1346	____________	____________
5. Cadillac	$3294	____________	____________

6. If the balance of $354.72 is to be paid in 12 equal monthly installments, how much will each installment be? ____________

7. If you owe $1295 on a car and can pay only $50 per month, how many months will it take to pay for the car? ____________

8. If you owe $784.64 on a car and make monthly payments of $34, how many months will it take to pay for the car? ____________

9. If the balance of $962.10 is to be paid in 15 equal monthly installments, how much will each installment be? ____________

Round quotients to the nearest cent:

10. 24/$816.24 11. 6/$540.08 12. $1056 ÷ 18

Name_______________________ Date_______________________

INTEREST ON MONEY

1. What is interest? Interest is money paid for the use of__________
2. The amount of interest paid depends upon how long the money is used and upon how much money is loaned or borrowed. The interest rate paid by banks is a percent of the money on deposit and the period of time is __________ year.
3. How do you find 3% of $500?
   a. Write the decimal fraction name for 3% __________.
   b. Write the correct operation sign (÷, −, +, x) .03 _____500.
   c. 3% of $500 is $ __________.

Example: A bank pays 3% interest each year. How much interest does a deposit of $500 earn in one year?

3% of $500

.03 x 500 = 15   The interest is $15.

Fill in the following blanks and round to the nearest cent:

	Money in bank	Interest rate	Interest earned	Amount of money in the bank at the end of one year
4.	$350	3%	$10.50	$360.50
5.	$525	2%		
6.	$75.50	1%		
7.	$125	3%		
8.	$8020	2%		
9.	$62.48	1%		
10.	$310	4 1/2 %		
11.	$431	5.5%		
12.	$1750	6.7%		

Name ______________________ Date ________________

Earning Money

A. Ellen often earned spending money by baby sitting in the afternoons. She was usually paid by the hour. Her hourly pay ranged from $.45 to $.90 depending on her duties. Figure how much she should charge for the following jobs.

	Hours Worked	Pay per Hour	Total Pay
1.	4	$.45	________
2.	3	.75	________
3.	4 1/2	.45	________
4.	4 1/2	.50	________
5.	2	.85	________
6.	6	.65	________
7.	4 1/2	.60	________

B. During the rush season, Frank worked part-time at the neighborhood store. He was paid by the hour. Find how much he earned on each of the following days:

	No. of Hours	Pay per Hour	Total Pay
Monday	3	$1.05	________
Tuesday	2	1.05	________
Wednesday	2 1/2	1.05	________
Thursday	4	1.05	________
Friday	6	1.05	________
Saturday	8	1.05	________
TOTAL FOR WEEK	______		__________

C. Sally baby-sits every day for her neighbor and is paid once each week. She receives 60 cents an hour. Last week on Monday she sat 1 1/2 hrs., Tuesday 1/2 hour, Wednesday 3 1/4 hours, Thursday 2 hours, Friday 1 1/2 hours, and Saturday 3 hours. What was her pay for the week?

____

Name ______________________________ Date ______________________

OUR CAR

It is convenient to be able to get into the car and go, isn't it? Let us see, however, what it costs to keep an automobile. Here are a few of the costs:

a. Gasoline	f. Repair
b. Oil	g. Insurance
c. Grease	h. License plates
d. Anti-freeze	i. Driver's license
e. Tires and tubes	j. Garage rent

Another item that many forget is annual depreciation. This is the amount the car loses in value each year. During the first year an automobile generally loses about 35% of the original cost.

Find the depreciation at the end of the first year on a car that cost, when it was new:

1. $2,600 __________ 3. $3,125 __________

2. $1,900 __________ 4. $4,500 __________

Mr. Brown bought a used automobile for $2,000 and kept a record of his expenses for a year. He traveled 9,000 miles and averaged 15 miles to a gallon of gas. The following are some of the expenses he had:

License plates	10.00	Anti-freeze - 6 qts at	.50/qt.
Safety lane	2.00	Repairs first year	$110.50
Driver's license	1.00	Insurance	84.00
Gasoline	.30/gal.		
Oil and grease every 1000 miles	4.50	Depreciation, 20% of cost	

5. How many gallons of gasoline did Mr. Brown use? __________________

6. What was the total cost of the gasoline? __________________

7. What was the total cost for oil and grease? __________________

8. How much did he pay for anti-freeze? ______________

9. How much did the car depreciate? ______________

10. Find the total cost of running the car for the year? ______________

11. What was the cost per mile? ______________

Many car owners protect themselves from financial loss in case of an accident by purchasing automobile insurance. Liability insurance protects a car owner against loss due to claims of persons his car has injured or whose property his car has damaged.

A standard form of automobile insurance is a $5,000 - $10,000 - $5,000 policy. Under this policy, the insurance company will pay claims up to $5,000 for injuries to an individual, $10,000 for injuries to 2 or more people, and $5,000 for damage to property.

A car which is insured for $5,000 - $10,000 - $5,000 injures two people. Each is awarded claims of $2,400.

1. How much does the insurance company pay? ________
2. How much does the car owner pay? ____________________

A car which is insured for $5,000 - $10,000 - $5000 injures an individual who is awarded a claim for $6,500

3. How much does the insurance company pay? ________________
4. How much does the car owner pay? ________________
5. If the car owner does not have insurance how much does he pay? __

A $5,000 - $10,000 - $5,000 policy in a certain city costs $48 for the Personal Liability insurance and $16 for the property damage insurance.

What is the total cost of the insurance? ____________

7. What percent of the total cost is the cost of the personal liability insurance? ________________
8. What percent of the total cost is the cost of the property damage insurance? ________________
9. For 15% more than the yearly premium the amount of insurance can be doubled. Find the cost of a $10,000 - $20,000 - $10,000 policy? ________________

A car may be insured against loss by fire at a cost of 44 cents per $100 value and against loss by theft for 32 cents per $100 value.

10. Find the cost of fire insurance for a car valued at $2400 ________
11. Find the cost of theft insurance for the car in Ex. 10. ________
12. What is the total cost of fire and theft insurance for the car in Ex. 10 and Ex. 11? ______________

AUTOMOBILE PROJECT GENERAL MATHEMATICS do not write on this test

* * *

Vinyl Top	$300.00	Power Brakes	$193.12
AM-FM Radio	159.60	Wheel Covers	22.75 each
Bucket Seats	289.75	Power Seats	120.00
Four-Speed Transmission	210.00	Tilt Steering Wheel	87.00
Air Conditioning	418.65	Tachometer	29.98

1. Sonny Bono went to buy a new car. The basic list price was $2832. He wanted a vinyl top, bucket seats, four-speed transmission and a tachometer. How much would you charge him?

2. Diane Carroll wanted air conditioning, power brakes, wheel covers, power seats, and an AM-FM radio. The basic price on her automobile was $4360. How much was the total purchase price?

3. Matt Dillon came to Sioux Falls to trade cars. He had paid $3695.11. How much would the depreciation be if the car depreciated 30 per cent for the first year?

4. Festus had bought a car for $620. The first year he owned it the depreciation was 20%. The next year it was 15%. How much was the car still worth after 2 years?

5. If we borrow $1750 to but a car, how much interest would you have to pay at 7%for one year?

6. If you borrow money for six months, what would you have to pay for borrowing $310 at 5.5% per year?

7. You do baby sitting for Mama Cass. She pays $1.45 per hour. If you work a total of 11 3/4 hours, how much should you collect from her?

8. You can get a job for the city washing police cars. For the first 40 hours you get paid $1.20 per hour. For any additional hours, you get paid $1.40 per hour. How much would you get paid for a week in which you worked 55 hours?

9. Charlie Brown traveled 8100 miles. He used 600 gallons of gasoline. How many miles per gallon did he average?

10. The price per gallon of gasoline varies from state to state and city to city. The average price that Charlie had to pay in the problem above was 38.9¢ per gallon of gas. How much money did he pay for gas?

11. The Brady Bunch bought an old car for $784.64. If they only could pay $24 per month, how many months will they have to pay?

12. If you went to Stichs and bought a Honda for $575.70, how much would you have to pay each month if the maximum finance period was 2½ years?

An automobile is insured for the following amounts:

Property Damage - $20,000
Bodily Injury - $15,000 per person and $30,000 per accident
Collision - $50 deductible

A car caused an accident involving a semi-trailer truck. This truck contained a male and female unicorn enroute to the Great Plains Zoo in Sioux Falls. Each Animal was valued at $9500. The tractor was valued at $18,500. The trailer was worth $11,000. Damage to the car was $875.00. Neither driver was injured. The truck rolled over and killed both animals (that is why there is no unicorn today). It caught fire, burned and completely destroyed the tractor and trailer.

13. How much would the insurance company of the car have to pay?

14. How much would the driver of the car have to pay?

AUTOMOBILE PROJECT NAME:

1	2	3
4	5	6
7	8	9
10	11	12
13		14

1
2
3
4
5
6
7
8
9
10
11
12
13
14

APPENDIX VI

PROJECT --- FURNISH AND DECORATE A HOUSE

KITCHEN (Room 1)

1. stove
2. sink
3. refrigerator
4. cupboards
5. clock
6. exhaust fan
7. floor tile (9" x 9")
8. ceiling tile (12" x 12")
9. paint for walls
10. curtains for windows

LIVING ROOM (Room 4)

1. couch
2. coffee table
3. lounge chair
4. t.v. set
5. stereo
6. lamps
7. clock
8. carpet for floor
9. paint for walls
10. tile for ceiling (2' x 4' panels)

BEDROOM (Room 5)

1. bed
2. box spring
3. mattress
4. chest of drawers
5. dresser
6. mirror
7. carpet for floor
8. paint for walls
9. tile for ceiling (2' x 2' panels)

BATHROOM (Room 2)

1. tub
2. stool
3. sink
4. mirror
5. curtains for window
6. tile for ceiling (12" x 12")
7. tile or paint for walls
8. tile for floor (9" x 9")

UTILITY ROOM (Room 3)

1. washer
2. dryer
3. iron board
4. electric steam iron
5. table for folding clothes
6. curtains for window
7. tile for ceiling (12" x 12")
8. tile for floor (9" x 9")
9. paint for walls

RECREATION ROOM (Room 6)

1. pool table
2. ping pong table
3. record player
4. couch
5. small t.v.
6. curtains for windows
7. paint for ceiling
8. tile or carpet for floor
9. paint or panel for walls

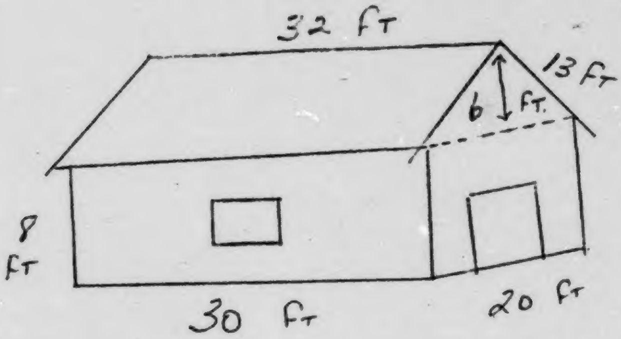
GARAGE

1. shingles for roof
2. paint for outside
3. dimensions (30 ft. by 20 ft.)

ROOM DIMENSIONS

Kitchen	10 ft. by 12 ft. with 8 ft. ceiling.
Bath	11 ft. by 11 ft. with 7 ft. ceiling
Utility	9 ft. by 12 ft. with 7 ft. ceiling
Living Room	18 ft. by 20 ft. with 8 ft. ceiling
Bedroom	12 ft. by 16 ft. with 8 ft. ceiling
Recreation Room	20 ft. by 24 ft. with 8 ft. ceiling
Second Bedroom (optional)	12 ft. by 12 ft. with 8 ft. ceiling

GARAGE



SHINGLES FOR ROOF

PAINT FOR OUTSIDE WALLS

PROJECT BELONGS TO: ______________________ NAME: ______________________

Room to which information applies ______________________

1. Dimensions of room: ______________________
2. Total cost of furnishings or appliances: ______________________
3. Total area of floor: ______________________
4. Total area of ceiling: ______________________
5. Total area of walls: ______________________
6. Amount of tile needed for ceiling: ______________________
7. Price per tile or carton: ______________________
8. Total cost for tile: ______________________
9. Amount of tile or carpet for floor: ______________________
10. Cost per tile, Carton, or sq. yd.: ______________________
11. Total cost of tile or carpet for floor: ______________________
12. Amount of paint needed for walls: ______________________
13. Price per gallon or quart of paint: ______________________
14. Total cost of paint for walls: ______________________
15. Cost for curtains: ______________________
16. Total cost to decorate the room: ______________________
17. Total cost to furnish and decorate this room: ______________________

GARAGE

1. TOTAL AREA OF WALLS
2. AMOUNT OF PAINT NEEDED FOR GARAGE
3. COST PER GALLON OR QUART
4. TOTAL COST FOR PAINT
5. AREA OF ROOF
6. NUMBER OF SQUARES OF SHINGLES
7. TOTAL COST FOR TEAR-OFF AND CLEAN-UP
8. TOTAL COST FOR SHINGLES
9. TOTAL COST FOR ROOF
10. TOTAL COST FOR ROOF AND PAINT

- -

2 COATS OF PAINT

1 GALLON COVERS 350 SQ. FT.

1 QUART COVERS 85 SQ. FT.

$$A = LW$$

$$A = \frac{bh}{2}$$

---

1 SQUARE OF SHINGLES = 100 sq. ft.

2. Add 10% of total area for waste and starter Row of Shingles.

SHINGLES $24.50 per SQUARE

Tear-off $ 8.00 per SQUARE

SCALE DRAWINGS:

1. make a scale drawing of each room in the house according to the dimensions given on the previous page.
2. make a three dimensional drawing of the garage.

SCRAPBOOK:

1. Make a scrapbook by actually cutting out pictures of furnishings and pasting them in actual position in the room. This may be expanded to figure out the size of the furniture, the size of the room and whether the furnishings could be arranged in that order.
2. The cover of the scrapbook could be a three-dimensional drawing of the house. This could be optional. Some of the students who are in drafting or mechanical drawing classes, may be able to show some of the other students how to make a three-dimensional drawing.

HOUSE DECORATING PROJECT TEST Name______________________________

WE HAVE A LIVING ROOM THAT IS 20 FT: BY 16 FT: BY 8 FT:
TWO WINDOWS ARE 3 FT: BY 3.5 FT: AND ONE WINDOW 10 FT: BY 4 FT:

* * *

1. What is the area of the floor?

2. What is the area of the windows?

3. What is the total area of the 4 walls?

4. What is the area of the ceiling?

5. Subtracting the windows, how much area is left in the walls?

6. If the area of a kitchen is 640 sq. ft. and a quart covers 110 sq. ft., how many quarts do you need to cover the walls?

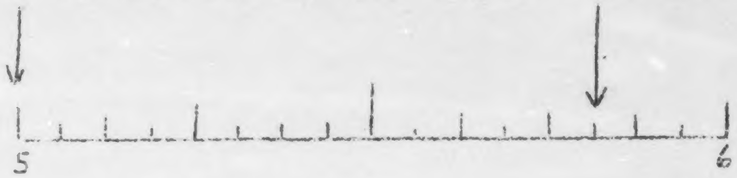
7. If you use 9 quarts of paint and the price is $1.73 per quart, how much does the paint cost?

8. If your floor area is 297 sq. ft., how many square yards of carpet do you have?

9. If carpet costs $8.52 per square yard, how much would carpet cost for 297 sq. ft.

10. We use 978 tiles. A carton holds 36 tiles. How many full cartons do you need?

11. If the scale is 1/16 of and inch = 2 ft., how many feet are represented on the following ruler?



12. If paint costs $6.95 per gallon and $2.34 per quart, how much would it cost for seven quarts if you bought it 1 quart at a time?

13. With the prices listed in question 12, how much would it cost to buy two gallons and two quarts?

14. If ceiling tiles cost 12 1/2¢ per tile and we need 978 tiles, how much will it cost?

15. What is the area of the roof on the garage?

16. How many squares of shingles are there?

17. What is the total area of the walls?

18. What is the total cost of paint using prices in problem 12?

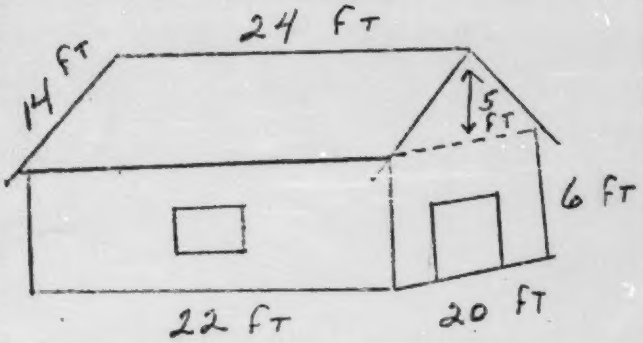
19. What is the cost of the shingles if you need 16.25 squares?

20. What would it cost to tear off the old shingles for 16.25 squares?

FACTS

one gallon covers 450 sq. ft.
one quart covers 110 sq. ft.
shingles - one square costs $24.50
tear off costs $5 per square

HOUSE PROJECT ANSWER SHEET Name ______________________


24 FT
14 FT
5 FT
6 FT
22 FT
20 FT

1.

2.

3.	4.	5.	6.
7.	8.	9.	10.
11.	12.	13.	14.
15.	16.	17.	18.
19.	20.		

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
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9. ______________________
10. ______________________
11. ______________________
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13. ______________________
14. ______________________
15. ______________________
16. ______________________
17. ______________________
18. ______________________
19. ______________________
20. ______________________

OBJECTIVES FOR GENERAL BUSINESS

1. Students will develop positive attitudes about work, school, and society.
2. Identify relationships between education and work.
3. Introduce students with a variety of career options.
4. Involve employers within the community with the students by speaking to the classes or by providing field trips.
5. Provide learning experiences which should assist students in identifying occupational opportunities as well as exploring occupations and trends relative to the mobile labor force.
6. Assist in developing desireable attitudes toward work and in recognizing the dignity of every occupation.
7. Provide opportunities to study our economic system and how it functions to help prepare the students for their careers.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Survey given as introduction to the course	Response by students will be according to their economic attitudes at the beginning of the course.	Survey given at beginning of course and at the completion of course to determine economic attitudes. Discuss these questions and attitudes in class. See Appendix A	Survey--Manpower and Economic Attitudes
Business Careers	Introduce occupations available in business.	Discuss the questions listed in the comic book. Students interested in further information may make reports for extra credit. It can be used at any point in the course of study.	King Features--Popeye and Business and Office Careers
Word Association Game	Discover individual knowledge and attitudes about business careers.	Use key words associated with business careers. This game may be used any time during the year. See Appendix B	
Business Careers	Students will gather information on the duties, qualifications, training, earnings, hours, advantages, and disadvantages in business careers.	This kit may be used for extra credit projects and for research in business careers.	Business Careers Kit, Largo, FL (Whittier Library)
Life Career--Simulation game	Simulate the way the labor market, educational opportunities, marriage, and leisure patterns operate in our society.	Discuss the decision-making situations involved in this game.	Life Career--Western Publishing Co. (IML)

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
"Careers in Business"	Acquaint students with business careers.	Poster to be used as a bulletin board display.	South-Western Publishing Co.--free
UNIT 1: OUR ECONOMIC WORLD Part 3--How Our Economy is Changing	Analyze how a job creates a style of living.	Discuss how a job creates a style of living for a worker and the total way of life for an individual after the lesson has been read by the student. See Appendix C	Manpower and Economic Education, page 131--"The Long Arm of the Job"
UNIT 2: THE NATURE OF AMERICAN BUSINESS Part 5--How American Businesses Are Organized	Students can learn information by communicating with business and industry through making appointments and talking with individuals in single proprietorship and of a partnership.	Interview the owner of a single proprietorship business or an owner of a partnership. Plan carefully in advance for your interview. Suggested questions: 1. Why did you choose to go into this type of business? 2. What training, education, and experience should a person have before attempting to start his own business? 3. What risks are involved in operation of a business? 4. How do you compete with similar business for customers?	
Movie (Retailing)	Evaluate the possible careers in retailing, distributing, mail order sales, buying, product development and testing.	Compile a list of the different careers observed in the film.	"Merchant to the Million"--free loan from Association-Sterling

Subject GENERAL BUSINESS Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Recognize the number of careers involved in retailing.	Discuss the retailing careers observed in the film.	"Retailing Careers"--free loan from Modern Picture Talking
	Develop an understanding that corporations handle large amounts of money and employ thousands of workers.	Use the discussion questions in Appendix D	Manpower and Economic Education, page 63--"The Business of America is Business"
Part 6--Men and Machines in Business	Appraise the changing job market.	1. Interview two persons who have been employed for some time. Ask each how his job has changed over the years. Find out what caused these changes. Also, find out what changes there may have been in qualifications for the job, such as skills, training, or experiences. 2. Collect "Help Wanted" advertisements from the classified section of newspapers (and possibly from other sources such as magazines and leaflets) pertaining to job opportunities in the business field. Analyze these advertisements and make a summary of the types of jobs for which workers are needed.	General Business for Economic Understanding, South-Western Publishing Co., page 80, #4 & #5.
	Determine the jobs available in the computer field.	Describe the careers observed in the filmstrip.	Filmstrip--"Careers in the Computer Field," Popular Science (IPC)
	Observe data processing equipment in operation.	Discuss what the students should look for during the field trip. After the field trip have a follow-up discussion.	Field trip--Data Processing

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Develop an understanding of how our economy functions to better help the students prepare for a career.	Read the case studies in class and develop solutions to the problems. See Appendix E	Manpower and Economic Education, page 1--"Education and Work: A Means of Discovering Yourself"
	Recognize the many different jobs available.	Compare the different types of jobs and how the workers on these jobs are contributing to producing goods and services. See Appendix F	Manpower and Economic Education, page 29--"The Work That People Do"
Part 7--How Goods Reach the Consumer	Observe business in action and better understand how it affects the economy. Involve students with employers of the community.	Field trip to retail store. Suggested areas to be covered: 1. Tour different departments and discuss the responsibilities of the clerks and department managers. 2. Retailer's and salesperson's point of view in dealing with customers. 3. Explore the channels of distribution of a good and the possibilities of different kinds of employment involved with this distribution. 4. Advertising and store display techniques. 5. Marketing as a career.	
		Those students interested in some phase of retailing make a report on their particular interest for extra credit. Describe qualifications for that particular job, working conditions, salary, and opportunities for advancement.	Business Careers Kit--Largo, FL (Whittier Library)

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Marketing (can be used after Part 7 or later in the year)	Develop decision-making skills.	Summarize the economic concepts involved in the game. Explain how the students fit into the total economic system both as an income earner and as a consumer.	Marketplace--Simulation Game (Joint Council on Economic Education) Located at Augustana or USD
	Determine the roles of bankers, retailers, manufacturers, wholesalers, and consumers which will enable the students to see how our economic system operates.		
Part 8--How Incomes Are Spent	Calculate take-home pay. Determine procedure for filing a short form.	See Appendix G	Teaching Taxes Program, Internal Revenue Service
	Create an understanding that work offers personal satisfaction in addition to the non-monetary rewards of work.	Questions for discussion: 1. How may you achieve the ability to earn money? 2. Name some "good things" in life that money cannot buy? 3. Discuss how family needs and income are likely to change with different stages in the life cycle? 4. How do you as an individual worker contribute to the productivity of the society? 5. What does working have to do with being a self-supporting and productive member of society? 6. How will the need to earn money cause your choice of courses in high school or college?	

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		Activities: 1. Compile a list of the goods and services available to your family without spending money. 2. Investigate the ways to earn money while in school. What factors should be considered if you work? Group Project: 1. Committees will study and report on ways to earn money income through hobbies, part-time work, special training, and education.	
	Analyze the relationship between consumer and seller.	Discuss the filmstrip in class as to how we can help the relationship between the consumer and seller.	Filmstrip--"Money Well Spent"--Guidance Associates (Whittier)
	Distinguish how consumer spending influences the overall output and employment.	Describe the two major functions of the consumer. Use the discussion questions in the lesson. See Appendix H	Manpower and Economic Education, page 77--"Consumers of Abundance"
Part 9--Face Up to Buying Problems	Identify the importance of merchandising, services to the customers, advertising, and selling.	List the job possibilities shown in the film and what duties are involved.	Film--"Report to Consumers" (Modern Talking Picture)--free loan
	Recognize the role of the income earner in spending his money wisely.	Discuss the reasons why we should learn to spend our wages wisely.	Filmstrip--"Buyer Beware," Guidance Associates (Whittier)

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Part 10--Becoming a Smart Shopper	Evaluate application of economic concepts in making choices and decisions as a consumer and/or producer.	Student will make a chart of various makes or types of a product and list the advantages, disadvantages, and price of each. Using this chart, the student will decide which one best suited his needs and give his reasons for his decision.	Career Development K-12, Level IV
	Explore the economic incentives offered by various occupational areas.	The students will invite office workers from different types of businesses to talk to the class about the economic incentives offered by their companies.	Career Development K-12, Level III
	Analyze case problem on shopping around for values.	Divide class into groups and analyze the case problem. See Appendix I	Teaching Personal Economics in the Business Education Curriculum, page 13-14.
Part 11--Your Rights As a Buyer	Evaluate the laws society has enacted for his protection as producer and consumer of goods and services.	The student will prepare a poster or transparency showing how various public and private agencies are available to assist consumers.	Career Development K-12, Level III
		Following a visit by a Better Business Bureau official in which he describes how the organization deals with deceptive advertising, unfair treatment of customers, fly-by-night business schemes, an unauthorized door-to door salesman, the student will role play appropriate reactions to simulated dishonest business practices. Discuss the Better Business Bureau's responsibilities.	Speaker--Better Business Bureau

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		After discussion of national, state, and local laws that protect the consumer, the student will prepare a bulletin board display relating to fraudalent practices	
UNIT 4: BANKS AND BANKING SERVICES Part 12--Why Banks Are Needed	Identify the different kinds of work available in banking.	Banks hire employees to do different kinds of work. By reading or talking to parents or others who have information about banks, find out the title of jobs held by workers in banks and try to get detailed information about one of these jobs. What qualities do you think especially needed by workers in banks?	General Business for Economic Understanding, page 156, #5. (South-Western Publishing Co.)
	Involve students with the employers of the community by a field trip or speaker.	Field trip to bank. View banking activities and the different departments or have a speaker from the bank to talk about the qualities needed to work in a bank and the different departments and the type of work involved.	Field trip to bank or speaker from the bank.
	Familiarize students with the jobs and duties of workers in a bank.	As an extra credit project, the students who are especially interested in banking could make a report or interview a worker in that particular department.	Filmstrip--"Money Tree," Bowmar (IML)
UNIT 5: USING CREDIT WISELY Part 18--Credit Helps Buyers Meet Needs and Wants	Recognize the role of a credit counselor.	Discuss the responsibilities of a credit counselor.	Filmstrip--"Cabbages to Kings & Things," Bowmar (IML)
	Evaluate as credit manager whether to grant credit in a role-playing situation.	Students role play an open-ended situation and draw their own conclusions.	Sears, Consumer Information Service--"Department Store in the Classroom," p. 19.

Subject GENERAL BUSINESS

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
		Roy Cowles is applying for credit to buy a color TV on time. The TV costs $450 and Roy wants to discuss the contract and payment arrangements. Peter Smith is the credit manager of the store. It is his job to check and approve credit applications. If you were Roy Cowles, how would you go about applying for credit? What questions would you ask about the contract? How would you convince Mr. Smith that you were a good credit risk? How would you react if you were refused credit? If you were Peter Smith, what would you want to find out about Roy Cowles before approving his credit application? How would you get the information you want? How would you handle it if you had to turn down the application? Have the applicant for credit fill out application. The interviewer must explain to the applicant the terms of the installment contract.	Sears, Consumer Information Services-"Using Credit," pages 8-17 (This may be used as supplementary material)
Simulation Game	Conclude proper uses of credit through a simulation game.	Compile a list of the proper uses of credit.	Simulation Game: The Credit Game, Voices of Life Game, Leswing Communications (USD)
Opinion Poll	Distinguish attitudes of the students on money management and credit.	Use these questions for class discussion after the poll is taken. See APPENDIX J.	

Subject GENERAL BUSINESS

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Part 19--Understanding of Types of Sales Credit	Understand the responsibilities of the job of a credit manager.	Speaker from credit department of a retail store to speak about the responsibilities of his job, education needed, and personal qualities.	Speaker from retail store.
Part 20--Borrowing in Order to Buy	Determine the importance of building a good credit reputation.	Representative from a credit union or consumer finance company to speak to the class about his job and responsibilities. Also the speaker should explain to the class the importance of building a good credit reputation.	Speaker from credit union or consumer finance company.
UNIT 6: ECONOMIC RISKS	Develop an understanding of the purpose of insurance companies and the large number of people they employ.	Booklet on the career possibilities in the insurance field.	Booklet entitled: "It's Up to You," from Institution of Life Insurance.
UNIT 7: SAVINGS AND INVESTING MONEY Part 30--Using Savings Accounts	Introduce students to the work possibilities in the field of savings.	Speaker from savings department of a commercial bank to describe the duties and responsibilities involved in his job.	Speaker from savings department of commercial bank or savings and loan company.
Part 31--Investing in Bonds and Stocks	Involve students in the activity of the investment business.	Local stock broker speak to the class or take a field trip.	Field trip and/or speaker at local stock brokers.

Subject GENERAL BUSINESS

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Understand the operation of the American Stock Exchange and explain the possible careers.		Booklet on how the stock exchange operates and the various careers one could have.	Booklet entitled: "Journey Through a Stock Exchange" American Stock Exchange Filmstrip-"Money Tree" (Investment Account Executives) Bowmar (IML)
Part 33--Investing in a Home	Students learn about the career of a real estate agent.	Real estate agent speak to the class about what his job entails.	Filmstrip-"Money Tree" (Real Estate) Bowmar (IML)
UNIT 8: COMMUNICATION & TRANSPORTATION Part 39--Communication & Transportation in Our Economy	Explore career opportunities in tourism.	There are many fine career opportunities for young people in fields related to tourism. Prepare a report describing the various kinds of jobs that are available in the travel industry. In your report, explain also why opportunities for employment in these kinds of jobs will increase in the future.	South-Western Text-General Business for Economic Understanding page 462, #3.
Part 40--Communication by Telephone and Telegraph	View various departments in operation.	Tour of phone company. Students can see the different departments and their functions and relate them to their career interests.	Field trip to the telephone company.

Subject GENERAL BUSINESS Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Evaluate the importance of proper telephone etiquette.	Show movie from telephone company, "How to Lose Your Best Customer."	Film,"How to Lose Your Best Customer," Free Loan, Northwestern Bell.
	Apply basic learning in a work situation and analyze their effects upon his job performance.	Use teletrainers where the students have the opportunity to make business calls. Students will write and perform skits depicting the different types of business telephone calls (for information, directions, etc.) The classes will evaluate the performance, tone of voice, and the appropriate manner. The students will tape these calls so they will be able to hear their own voices and take part in the evaluation.	Available from Northwestern Bell.
Part 43--Transportation of Goods	Explore occupations in the transportation industry.	Prepare a brief written report on an occupation in the transportation industry. This occupation may be that of a truck driver, bus driver, dispatcher, traffic manager, or any other occupation that you want to learn about.	South-Western Text--General Business For Economic Understanding page 506, #5.
Part 45--Americans Travel	Determine how a travel agent plans a vacation.	Speaker from travel agency to explain the careers in tourism and the type of work involved.	Speaker from travel agency.
	Identify careers available in the airlines.	Speaker from the airlines to explain his work and the many different job possibilities available with the airlines.	Speaker from airlines.

Subject GENERAL BUSINESS

Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
UNIT 11: LIVING & WORKING IN OUR ECONOMY Part 51--Looking at Your Work Motives	Describe attitudes and behaviors which generally apply to any work situation.	Students will identify those attitudes and behaviors which apply to any job. Discuss these in class.	
	Decide the reasons why work is a necessary part of life.	These cartoons can be used for a bulletin board display or given to each student in the class and used for discussion. See APPENDIX K.	Manpower and Economic Education, page 37-40 "The Joy of Work"
	Understand that opportunities exist in many fields of work and that a person can prepare for one or more occupations in which he is interested.	Divide the class into small groups and discuss the reasons why we work. Students discuss the concept of "success" and what it means.	South-Western, Teacher's Activity Guide, "Suggestions for Teaching Procedure" page 78.
Part 52--Changing Job World	Explain how economic fluctuations may affect the job opportunities.	Using pictures, articles, or charts, students will prepare a bulletin board showing the increase or decrease of job opportunities of the "white collar" workers over the last fifty years.	Career Development K-12, Level IV

Subject GENERAL BUSINESS Grade Level 9

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Part 54--Getting That Job	Realize that part-time jobs can contribute to developing experience for future success.	Discuss in small groups Questions 2-7, page 639--Applying What You Have Learned.	South-Western Text--General Business for Economic Understanding, page 639.
	Demonstrate work habits and attitudes.	Skit entitled "Living and Working in Our Economy."	General Business Skits, South-Western Monograph Number 124.

Subject____________________

Grade Level ____________________

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Mini Unit	Analyze what career fields offer the most promise in the future. Recognize that there are important changes occuring in occupational distributions.	After the students have read the material, go over the discussion questions and activities listed in the teacher's guide. Describe why people change occupations and the mobility of the population. Discuss the effects of technology on the employment opportunities.	Jobs: An Updated Look into the Future, Changing Times Education Service. South-Western Teacher's Activity Guide--"Suggested Teaching Procedures," page 78.
	Develop an understanding that today's occupational skills will not be good enough for tomorrow's jobs.	Compile a list of how the students can meet the challenge of change in the world of work. See APPENDIX L.	Manpower and Economic Education, p. 89-94--"Are Today's Skills Good Enough for Tomorrow's Jobs?"
	Learn the type of qualities you need to develop for your job.	Discuss how the students might improve their own personalities.	Filmstrip--"Personality in Business," Popular Science (IPC)
Part 53--Planning Your Career	Explore the economic inventives offered by various occupational areas.	Students will invite office workers from different types of businesses to talk to class about the economic inventives offered by their companies.	South-Western Text--General Business for Economic Understanding, page 626.
	Evaluate the need to start exploring and studying job opportunities early in life.	Discuss in small groups Questions 1-4, page 626--Applying What You Have Learned.	

Subject GENERAL BUSINESS

Grade Level 9

APPENDIX A

SURVEY OF MANPOWER AND ECONOMICS ATTITUDES

The statements on this questionnaire are expressions of attitudes or feelings about a wide variety of topics.

For each of the statements, you are asked to tell whether you Strongly Agree, Agree, Disagree, or Strongly Disagree. If you have no particular feeling about the statement or do not understand the statement, mark Undecided.

This is not a test. There are no right or wrong answers. Your responses will not affect your grades in any way. We want you to indicate your personal opinions about these topics.

Responses

Strongly Agree	Agree	Undecided	DISagree	Strongly DISagree
1	2	3	4	5

Statements

1. What is good for American workers is good for the American economy.
2. Employers would rather hire older people (over 35) than younger people (under 20).
3. A married worker with a family should be paid more than a single worker even if both do exactly the same job.
4. Actually, whatever success I have in my work career depends pretty much on factors beyond my control.
5. The sharp reduction in number of people working on farms during the past 20 years is something for the American people to be happy about.
6. If a person plans his education and training carefully, he is almost sure to succeed in his job career.
7. Most employers are sincerely interested in the welfare of their workers.

Responses

Strongly Agree	Agree	Undecided	DISagree	Strongly DISagree
1	2	3	4	5

Statements

8. Automation is good for American people and ought to be encouraged.

9. Our country's economic progress is due mainly to the free enterprise system.

10. The farmer is the person who contributes most to our economic well-being.

11. All honest work is worthwhile, and therefore all workers deserve respect.

12. Work is a necessary evil.

13. Most American workers are paid just about what they deserve.

14. The business man is the person who contributes the most to our economic well-being.

15. It will be hard for me to find a good job.

16. "Taking it easy" on the job is all right as long as you don't get caught by the boss.

17. The proper objective of all economic activity could be to satisfy the wants of consumers.

18. Government employees generally aren't as efficient and hard-working as people who work for private businesses.

19. Luck will play an important role in determining whether I get a good job.

20. High profits are necessary for the survival of our economic system.

21. The major cause of inflation is high profits of business.

Responses

Strongly Agree	Agree	Undecided	DISagree	Strongly DISagree	
1	2	3	4	5	Statements

22. Poverty will always be a serious problem for millions of families in the U.S.

23. Taxes are too high in the United States.

24. The worker is the person who contributes most to our economic well-being.

25. Public schools in South Dakota communities generally have enough money to provide a good education for all children.

26. Men ought to get higher pay than women even if both do exactly the same work.

27. The main purpose of our economic system should be to satisfy the needs and wants of the American people.

28. Married women with children under 15 should not hold a job.

29. A worker who is a college graduate ought to be paid at least twice as much as a high school graduate.

30. I think my chances of getting a good job will be a lot better than my father had.

31. Young people need a lot more help in finding jobs than they are getting now.

32. Women ought to be able to rise just as high in the world as men.

33. Industry should hire high school graduates rather than dropouts.

34. An understanding of economics would be very helpful to junior high school students in planning their careers.

APPENDIX B

WORD ASSOCIATION

Discover student attitudes by having students write down first word that comes to mind in connection with the worker or possible careers in business. The following are some suggestions that may be used:

1. values
2. goals
3. job
4. social security
5. agent
6. teller
7. stenographer
8. salesman
9. corporation
10. manager
11. services
12. retailer

APPENDIX C

The Long Arm of the Job

A job is more than a means of earning a living. The "long arm of the job" reaches out to influence a worker's TOTAL life. What work you do, why you do it, where, how, and with whom you perform your job will greatly influence your whole life style. The job helps to shape personal behavior patterns and extablish beliefs in certain ideas, values, and attitudes.

* * * * * * * * * * * * * * * *

What is meant by the following statement? "What a man is, both in his own mind and in the eyes of others, is closely involved with the work he does.

It means, plain and simple, that the kind of work you do, and how well you do it will contribute a great deal to forming your personal identity.

Decisions you'll be making in the next few years about your choice of a career will have a tremendous effect on your total future life. You'll need to decide whether you'll graduate from high school, "where from there?" -- technical school, job, college, nurses' training, business school, armed forces, marriage.

* * *

Consider just a few of the ways a person's choice of a vocation might affect his future! (Try to answer the questions that are asked.)

1-- The choice of an occupation may determine whether he is employed or unemployed. (How would employment or unemployment in turn affect his needs and how they are met?)

2-- It may determine whether the person enjoys or hates his work. (How will this affect his performance on the job?)

3-- The choice may determine "success" or "failure" in life. (How? In what sense?)

4-- It may affect his whole style of living.

Let's pursue this fourth point. Think about the ways that your vocational decisions might shape the way you live, by influencing:

--the atmosphere in which you will work
--the men and women with whom you work
--the kind of clothes you wear
--the car you drive

--the house you live in
--where you'll live (the state, the town, the neighborhood)
--the people who will be your friends
--the clubs and organizations you belong to

--your hobbies and recreational activities
--your ideas on political affairs
--your choice of books and magazines to read
--the kind of education your children will have

--the way you express yourself, accomplish things, and
contribute to the world you live in.

How can your job, your occupation, your career have an influence on each of the above parts of your life? In the space below, jot down a few specific examples that you can think of:

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Today's Lesson in Brief

A job creates a style of life for a worker. Its influence extends beyond his place of employment and length of the work day. The "long arm of the job" reaches into his home and family, affecting his total way of life--his ideas and ideals, attitudes and interests, manners, clothes, and even the way he speaks.

The Long Arm of the Job

We want the students to gain insight into how a man's job can affect his whole way of life. This lesson is merely an introduction to the theme of the "long arm of the job" which will be discussed in more detail in later lessons. The lesson raises a number of questions which we hope you will discuss in some detail with the class. Take care to avoid overstating the theme that "the job has a long arm". Certainly there are workers who manage to separate their work entirely from their off-the-job lives. A TV commercial played on this theme: the bulldozer operator whose hobby is painting seascapes; the carpenter who spends his weekends yachting; the sales clerk who attends symphony concerts and ballet performances. A job will influence the worker's life style, unquestionably; but it need not exert a totally deterministic influence in the case of each and every worker. The quote in the second paragraph, "What a man is ... does.", has been adapted from an interesting article by Marc A. Fried, "Is Work A Career?", *Trans-action*, September-October, 1966.

Answers to Discussion Questions

Page 1. 1--SUGGESTED ANSWERS: Our needs are influenced by our environment. Obviously, the environment of an unemployed worker is different from that of a man with a job. The job can also be a source of need-satisfaction. If a man is unemployed, this source is not available and he must look elsewhere to get his needs satisfied. 2--SUGGESTED ANSWER: If you enjoy your work you are more likely to perform at a higher rate of efficiency. 3--SUGGESTED ANSWER: In our society the "success" or "failure" of a man is often defined in occupational terms; and some jobs are more likely to bring success than others. For example, jobs which are appropriate for your skills, attitudes, values, are most likely to bring you occupational success. Page 2--"How can your *job*, your *occupation*, your *career* have an influence on each of these facets of your life? SUGGESTED ANSWER: Will vary and are almost unlimited in number.

Extra Discussion Questions

1. Ask the students to give some examples of how their parents' jobs affect their lives.
2. You could ask the students to comment on the following: A well-known business and data processing machine producer has gained the reputation of telling its management trainees that if they expect to gain promotions in the firm "they are expected to conform to certain rules of behavior dress, etc."
3. Have students describe how they think one specific occupation (e.g., plumber, doctor, busdriver, farmer, policeman, drill press operator, sales clerk) influences that worker's style of life.

Background Reading

Anderson, DIMENSIONS OF WORK, 1964, chapter 7, pp. 133-144.

Goodman, GROWING UP ABSURD, 1960, chapter 1, 3, 7, 11, pp. 3-16.

CFEE, "Psychological Dimensions of Work", Technical Paper #2, 1967, pp. 1-5.

Isaacson, CAREER INFORMATION IN COUNSELING AND TEACHING, 1966, pp. 144-166.

M&EE:oael/rldpep/1968/N5/TM#33

APPENDIX D

"The Business of America is Business"

> Calvin Coolidge, who was President of the United States in the 1920's, is well-remembered for making the statement that appears as the title of today's lesson. "Business" is an important part of the economic life of our nation, accounting for 80% of our total production and income. BUSINESS FIRMS, hoping to make profits, make many of the buying and selling and operating decisions that determine production, employment, and marketing in our economy. One form of business organization, the CORPORATION, receives nearly four-fifths of all business income and manages two-thirds of the nation's total production.

A business firm (or simply "business" or "company") buys resources of labor, land, and capital in the input market. It combines and coordinates all these resources to produce goods and services. And then it sells the goods and services in the output market.

Why is it that business firms are willing to take on all this responsibility and effort and risk? The answer is that they hope to make a profit. They expect to be able to sell the finished products for prices that are high enough to be able to cover all their costs of operating the business and still have some profit left over. (Profit = Total Receipts - Total Costs)

The mainspring of business, the driving force that makes business run, is the profit motive. Business firms produce goods and services not "to satisfy human wants" but to sell them in the market in order to make profits for the owners and managers of the business, and to provide investment funds for expanding the business. Generally speaking, in order to make profits the firm must produce goods and services that satisfy the wants of consumers. This system of production also provides jobs and incomes for workers and for other resources.

* * *

Not counting farms and self-employed professionals like doctors and lawyers, there are about five million business firms in the United States. One million businesses are organized as corporations; nearly one million are partnerships; and three million are sole proprietorships. (If we included farms and professionals who sell their own services, the number of proprietorships would be nine million; and the total number of businesses in the country would be over 11 million.)

Most businesses are small, employing fewer than four workers. Many of these firms make no profits, and thousands of them "go broke" every year. The average life of a business firm in the U.S. is seven years. The big corporation, however, are generally much more stable, and earn more profits.

* * *

Some corporations have grown to tremendous size. They are responsible for the production and sales of billions of dollars of goods; together they employ millions of workers; and they are "owned" by millions of stockholders (Table I shows that the 500 biggest industrial corporations actually do more business than the total sales of all 9,000,000 proprietorships put together!)

General Motors corporation, for example, had assets of $12.5 billion in 1965 and sold $20.7 billion worth of automobiles, trucks, diesel locomotives, and a variety of other goods. Three-quarters of a million workers were employed by GM. Profits after taxes totalled $2.1 billion. This was a 10.3% profit rate figured as a percent of sales, and it was a 25.8% profit rate figured as a percent of invested capital.

General Motors is the biggest industrial corporation in the nation. But the Ford Motor Company, Standard Oil of New Jersey, and General Electric are giants, too. Each had more that five billion dollars of sales receipts in 1965. The American Telephone and Telegraph Company (you may have read about AT&T) had assets of $32.8 billion in 1965, operating revenues of $11.1 billion, net income of $1.8 billion. The corporation employed 795,294 workers and had over two million "Owners" (that is stockholders).

Four large corporations -- General Motors, Ford, General Electric, and U.S. Steel -- had more employees in 1965 than the entire Federal Government, not counting the Department of Defense. General Motors alone handled more money (receipts and expenditures) than the state governments of Ohio, Pennsylvania, Michigan, Illinois, New York, California and Texas combined.

* * *

What is a corporation? The simple answer is that a corporation is a form of business organization that gives the firm a separate legal existence. Money to set up and operate the business comes from people who buy shares of stock. These are the Stockholders, and might be thought of as the owners of the business. They are risking the money they "invest" in the corporation, and their hopes are to receive dividends (regular payments on each share of stock they own) and also to make capital gains (profits from increased market value of the stock) if and when they choose to sell their shares to somebody else.

Under the corporate form of business organization, basic policies are set by the Board of Directors, whose members are elected by the stockholders. The Board hires a President, Treasurer, and other members of "management" as Officers to run the corporation.

There is also a more complicated answer to the question: What is a corporation? Some economists believe that the giant corporation is really a new economic institution; one that replaces the supply and demand system of market competition. They point out that General Motors is really more like a government agency -- TVA, or the State of New York, or the Department of Defense -- than like the corner grocery store or the small tailor shop or a construction firm. It will be interesting to watch the giant "quasi-public" corporations during the next 20 or 30 years, to see how they affect the nature and performance of our "mixed-capitalism" economy.

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Today's Lesson in Brief

The business sector of our economy accounts for 80% of our total production. Business firms assume the responsibilities of coordinating production in hopes of making a profit. Some business corporations have grown to tremendous size, handling billions of dollars and employing hundreds of thousands of workers.

The Business of America is Business

This lesson provides an introduction to business in general and the large corporation in particular. It explains the functions and motivation of business enterprise, and how business fits into the circular flow of business enterprise, and we have deliberately avoided going into details about the advantages and disadvantages of different forms of business organization.

The main objective is for students to learn that a business firm is an organization that employs resources to produce goods and/or services; it is motivated by a desire to make profits; it occupies a pivotal role in the circular flow of economic activity -- buying in the input market and selling in the output market. Of great importance is the corporation -- a particular form of business organization -- and the fact that some corporations dominate their industries, replacing traditional market competition and becoming a new institutional structure for allocating resources, producing goods and services, and distributing income.

References. McConnell discusses business in chapter 8 of ECONOMICS. The FORTUNE DIRECTORY, published every August in FORTUNE magazine gives a detailed analysis of the largest corporations. The POCKET DATA BOOK USA 1967 contains relevant statistics on page 239.

Figures included in the introductory statement of the lesson were developed as follows. The private (business investment + consumer spending) sector of our economy absorbs 80% of total SNP, with Government Purchases of Goods and Services absorbing the remaining 20%. According to figures in the POCKET DATA BOOK (p. 239), corporations had 78% of total business receipts in 1963. Multiply 78% times 80% and this gives about two-thirds of total value of production accounted for by business corporations.

Discussion Questions. There are no questions explicitly asked in the text of the lesson. If time permits, ask students to explain why some corporations have grown to such enormous size. Ask them also to recall the five basic institutions of pure capitalism (lesson #5) and see how well they apply to a corporation like General Motors. Is there private property? (Who really owns the corporation's assets? If the answer is "the stockholders", discuss the actual power of an individual stockholder to control and dispose of the machinery and buildings and products of GM) Do the managers of GM attempt to maximize profits? (Who actually gets the profits earned by GM?) Is there competition in the automobile industry? (Are there so many sellers of cars that no individual company has the power to influence the price of cars?) Is there "free enterprise" in the automobile industry? (Are individuals and groups of individuals free to come into existence as a producing unit in the automobile industry? What are some of the problems involved in setting up a new corporation in the auto industry? Are prices set by supply and demand forces in the market? (Who determines the price tags that are put on new cars? Who determines the wages that will be paid to auto workers?)

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APPENDIX E

Education and Work: A Means of Discovering Yourself

> Your education and work experiences can help you learn more about yourself and the goals you want to achieve in life. Economic and manpower information can be useful to you in planning a career. Understanding how our economy operates--and the role that people play in economic life--will be valuable to you in obtaining your personal goals.

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The case studies that follow are true. They involve real people and illustrate some of the problems and opportunities that you may be faced with in the next few years. As you read these case studies, ask yourself what each of these people did or did not do that created the situation in which they found themselves.

CASE #1 "No Love for the Iron Horse"

"In 1940 I heard they were hiring people at the automobile assembly plant. I figured I'd get a job and then, with the electrician experience I got in vocational school, I could work my way up to a good job. The idea of making automobiles sounded like something pretty important. Lucky for me, I got a job and was made a spot welder. There wasn't much to the job itself. I picked it up in about a week. Later I was drafted into the Army. When I came back in 1946, I tried to get into the Maintenence Department as an electrician, but there was no opening. So I went back to the assembly line -- we call it the 'iron horse'. They made me a welder again, and that's what I've been doing ever since.

"My job is to weld the hood to its metal underbody. I take a job off the bench, put it in place, and weld the parts together. The job is all made up, and the welds are made in certain places along the metal. Exactly twenty-five spots. The line runs according to schedule. Takes me one minute and fifty-two seconds for each job. The cars differ, but the job is practically the same thing every time. Finish one car and then have another one staring me in the face.

"I don't like to work on the assembly line -- no man likes to work on a moving line. You can't beat the machine. Sure, maybe I can keep it up for an hour, but it's rugged doing it eight hours a day, every day in the week all year long.

"When I'm working there is not much chance to get a breather. Sometimes the line breaks down. When it does we all yell 'Whoopee!' As long as the line keeps moving I've got to keep up with it. On a few jobs I know, some fellows can work up the line, then coast. Most jobs you can't do that. If I get ahead maybe ten seconds, the next model has more welding to it, so it takes ten seconds extra. You can't win. You're always behind.

"I like a job where you feel like you're accomplishing something and doing it right. When everything's laid out for you and the parts are all alike, there's not much you can accomplish. The big thing is the steady push of the conveyer -- a big machine that I can't control.

"It's hard to feel that you're ever doing a good quality job. There's a constant push, at high speed. You may improve after you've done a thing over and over again, but you never reach a point where you can stand back and say, 'Boy, I done that one good. That's one car that got built right.' If I could do my best work I'd get some satisfaction ou tof working, but I can't do as good work as I know I can do."

Questions

1. What kinds of economic activity are described in this case?
2. Why do you think this worker feels the way he does toward his job?
3. How do you think you would feel if you were a worker on the 'iron horse' assembly line?

* * *

CASE #2 "The Dropout Who Came Back"

"Joe Sorrentino has 25 scars on his hands to prove that he is a street fighter. By the time he was 20, he had flunked out of high school four times, had been booted out of the Marines, and had lost 30 jobs. The second oldest of seven children, Joe always wanted to be an 'achiever', and in his neighborhood an achiever had to be handy with his fists. A veteran of more than 100 rumbles, Joe was put on probation by a juvenile court after one particularly bloody street fight. When he was in his first year of probation, he flunked out of high school. Not long after he enrolled in another high school at night -- he failed there also. In a third try at high school he didn't last a semester.

"At 14, Joe had begun trying his hand at various jobs, achieving a record for failing which was 'better' than even his school career. On his first day of work at a bleach factory, he attempted to carry 10 gallons of bleach to a truck he was loading and dropped all 10. Joe later worked in a sweater factory, where he had the embarrassing experience of being awakened from a nap by the President of the company. Another job opportunity for Joe came through a furniture company's ad in the newspaper which read: 'Want ambitious young man who seeks responsibility.' After a month of aligning wheels of teacarts, he got tired of responsibility.

"Joe enlisted in the Marines when he turned 18 but could not stand the discipline, and rebelled. He fought with recruits, rioted in the mess hall, and tried to run away. Judged an 'incorrigible' by the Marines, he was sent packing with a General Discharge. Back home, he was a hero to the old street-gang buddies. But within himself, Joe felt ashamed. At 20, he came to realize that his only chance for a better life was through education. So he went back to high school, for the fifth time, at night, working days in a supermarket. After two years, he graduated with the highest average in the night school's history.

"Despite only fair results on college entrance exams, his grades got him admitted to the University of California. At first, Joe felt he had nothing in common with the college youths who talked about summer vacation and beach parties -- things he knew nothing about. But he stuck it out and in his senior year, was elected president of the student body. After graduating with honors, Joe went back to the Marine Corps for two years, feeling that he had to make up for his past record. He did. This time he became a platoon leader, highest scorer in athletic competition, and changed his General Discharge to an Honorable one.

"In June of last year, 30-year-old Joe Sorrentino was valedictorian at Harvard Law School. He has received several offers to work for major U.S. Law firms. Instead, he wants to serve a term as an assistant U.S. or State attorney in California."

Questions

1. Identify some of the attitudes and values that Joe had before he finished high school, and compare them with his later outlook on life.
2. What can we learn from Joe's case about job opportunities and the economic rewards that are available in our economic system?

* * *

CASE #3 "Skill and Satisfaction

"I'm a die designer. We draw up the prints when somebody has a bright idea for a new die. Dies are tools that are used in the plant for shaping material for machine production. They come around to the planner and ask him whether or not we should work on it. They then give it to us and we have to design a die that will compete with one that they might have had designed outside the firm.

"I used to make dies, that's how I got started. I came to XYZ Corporation for my apprenticeship right out of high school. I had a friend whose father was a supervisor and this fellow started in here. In those days employment was tight and it wasn't easy to get a job, but I came in after my friend did. He told me about it and managed to get me in. But I wasn't doing tool and die work then. They started me on the assembly line. I worked on the line nights. But after I was in the plant for a while I looked around and I thought that I'd like to go into die work.

"You'd walk into the die shop and it was always so neat and clean. They clean the machines up every weekend. The floors are always clean. Well, one of the supervisors thought I could learn the work so he took me on as an apprentice. I had to take a cut in pay but it was worthwhile. So I started at the bottom. Along with your work on the job you were supposed to go to school at night. We started there by taking what they called a five-year course. I finished it up in 2800 hours. That meant some going. They taught us all that an engineer learns, but from a practical standpoint.

"I'm always trying to do the best job I can. XYZ is my company. I'm going to stick with them until they cross me up. Until now they've been very good to me. If the work I do doesn't satisfy them, that's just to bad. I always do the best I can.

"When I got back from the Army after the war I thought I should be in a higher position. I never said anything about it but one day the boss called me into his office and he asked me if I wanted to be a designer. I had never been great shakes at drawing in school but I figured I'd have a go at it. Well, that's what I'm doing today and I'm one of eight in the whole plant. What I draw and design in eight hours a day makes enough work to keep production men busy for fifty or sixty hours.

"The engineers in our firm who are college graduates have to come to me to ask questions. I won't take anything away from them, they're smart. They know all about stresses and strains but when they want something done they have to come to us. That's something I'm very proud of."

Questions

1. How would you describe this worker's attitudes toward his job? Toward life?
2. Do you think this worker has achieved success? Why?

* * *

Today's lesson, and many others in this course, will help you think about your place in the manpower market and the economic world. By providing you with economic information and asking some key questions, we hope that you will become interested in learning about the changing economy, the role that work plays in man's life, and the relationship between economic life and human development.

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Today's Lesson in Brief

Jobs and education can be means of understanding yourself and developing your human capabilities. Knowing how our economic system functions can help you understand an important part of your environment -- modern technology and the larger social world in which you live. This study of economics and work should prove to be a useful tool to you in achieving your life goals. Your chances of finding meaningful employment and building a life of purpose and fulfillment will be better if you prepare yourself now for tomorrow's opportunities.

Education and Work: A Means of Discovering Yourself

This lesson introduces the students to some of the concerns and ideas they will be studying in the course. The purpose of the lesson is to help the student see that there is a need to think about their economic roles in life -- especially their income-earner or worker role. The lesson should suggest to the students that the types of things included in this course have relevance for their future.

There are a few terms in the lesson that may be unfamiliar to the students, but which we do not define. (For example, "manpower market" -- see "Manpower Market: Men and Jobs" lesson.) These and other new words will be carefully and fully explained in lessons that follow. Cases #1 and 3 are rewrites of narratives appearing in THE AMERICAN WORKER IN THE TWENTIETH CENTURY by Eli Ginzberg and Hyman Berman. Case #2 was adapted from the December 1967 issue of OCCUPATIONAL OUTLOOK QUARTERLY.

Answers to Discussion Questions. PAGE 2. #1, SUGGESTED ANSWER: Production (i.e., manufacturing automobiles); Employment (i.e., hiring people and bringing together the factors of production); Work ("My job is to weld to hood"); #2, SUGGESTED ANSWER: Answers will vary, but should suggest that the job doesn't fulfill the worker's needs -- especially his "instinct of workmanship" (he doesn't have an opportunity to "do as good work as I know I can do".); #3, SUGGESTED ANSWER: Will vary and no single correct answer; students might blame the worker for having "a bad attitude" or blame the job for not being interesting or challenging. PAGE 3. #1, SUGGESTED ANSWER: Before Joe finished high school he had little or no respect for the law ("on probation"), didn't care whether he succeeded or not ("flunked out of high school" and fired from some of his jobs", and had very little use for discipline (all the above and his Marine Corps experience). Joe's outlook later in life seems to be completely reversed as seen in his behavior. He succeeds in high school and college; then rejoins the Marines and becomes a leader; goes to Law School and graduates with honors. #2, SUGGESTED ANSWER: Will vary, but should include: employers want workers who will do their jobs; education is a means of providing yourself with more job choices; higher economic rewards are available in some occupations and usually depend on the worker having more education or training. PAGE 4. #1, SUGGESTED ANSWERS: Will vary, but may include: enjoyment of his work and pride in doing a good job. He thinks his job is important, and he plays a vital role in the activities of XYZ Company. His work role seems to contribute to his enjoyment of life; #2, SUGGESTED ANSWER: No correct answer. Answers will vary depending on how students define success. See "What Price Success?" (lesson #70) for more ideas on success.

Background Reading. (All of the following references are included in the "Basic Manpower Economics Library".)

Issacson, CAREER INFORMATION IN COUNSELING & TEACHING, 1966, chapters 5,6.
Gardner, SELF-RENEWAL, 1965, chapters 1,2,4,5,7,8,11,12.
Anderson, DIMENSIONS OF WORK, 1964, chapters 1,2,3,4,6,7.
Goodman, GROWING UP ABSURD, 1960, chapters 1,2,3,8,9,10,11.
Venn, EDUCATION AND WORK, 1964, pp. 1-29.

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APPENDIX F

The Work That People Do

> "I am the people, the mob, the crowd, the mass.
> Do you know that all the great work of the
> world is done through me?"
>
> -- Carl Sandburg (I Am The People, The Mob)

The division of labor is carried so far in the American economy that workers today are employed on almost every type of job you could possibly think of. The United States Department of Labor has classified 36,000 jobs and nearly 500 separate occupations. Descriptions are given for work that men and women do in our economy.

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We have seen how specialization and the division of labor help to increase the productive powers of labor. But how is the work divided in the U.S. Economy? What specific kinds of jobs do the men and women in our work force do?

There is a great variety of jobs in the American economy. There are in fact, according to the Federal government's job classification system, 479 individual occupations which have 23,000 definitions and 36,000 titles. All of these jobs contribute to our economic, social, and personal well-being. These jobs differ in many ways -- hours of work, pay, working conditions, employment requirements, location, and the size of the enterprise that employs the workers.

We'll look at the panorama of jobs in our economy so that you will have some idea of the various types of opportunities there are for employment in the American economy. The more you know about jobs the better will be your understanding of the manpower market, where employers hire workers.

The job want ads that follow on the next few pages are the type that newspapers in America carry every day. As you read these job announcements, ask yourself the following questions:

1. Which of these jobs is of interest to me? Why does it interest me?
2. If I take the course of study I'm planning on for the rest of my schooling, which of these jobs could I qualify for?

BOY AND GIRL GRAPHIC DESIGNERS: ARE YOU TIRED OF THE CITY?

Let us offer you the opportunity of designing High Style collateral material and the facilities to Art Direct from beginning to end under one modern roof.

Send us six of your best pieces along with a brief resume. If suitable, we'll fly you to our place in the country. You'll find national accounts for your ego and a pastoral atmosphere for your peace of mind. (Check us in D & B if you just can't believe it.)

Alderman Studios, Inc.
High Point, NC. 27261

HOUSEWIVES

Part time work in sales for evening and Saturday hours. Some day hours. Immediate discount on purchase.

Apply in person.

ASSISTANT TREASURER
Educational Service Organization

Man with accounting background needed to assist department head and oversee accounting department. Must be good correspondent and able to communicate with contacts in financial community. Accounting degree required, experience in College Fund Accounting desireable but not necessary. Office Midtown Manhattan. Generous fringe benefits. Salary open. Send detailed resume.

Box X 7442 TIMES

BEHAVIORAL SCIENTISTS

For Management Development

The Challenge: Developing managerial resources in one of several multi-divisional complexes.

The Program: Independent responsibility in an all-out, close-working group operation that involves

Managerial performance evaluation.
Executive selection and assessment.
Early identification of potential.
Organizational analysis and planning.

The Goal: Transformation of management potential into a dynamic and productive management force.

The Requirements: An advanced degree in psychology, five or more years combined clinical, industrial or consulting experience. Ability to use sophisticated personnel assessment techiniques and behavioral principles for genuine contributions to the very highest levels of management.

The Atmosphere: Rewarding. With full recognition for this important function in a pregressively expanding billion-dollar corporation. Positions exist at several attractive locations.

Please send resume and salary progress and current requirements.

SOLENOID VALVE SALES

Due to expanding present line of solenoid valves, large mid-west manufacturer had openings for additional sales engineers. Three or four years experience is required with a preferred background in pneumatics and hydraulics. There will be some nation-wide travel from the base operation. Company car, excellent salary and liberal employee benefit program will be available. Submit resume and salary requirements.

MACHINE REPAIR
MACHINISTS

Full time, 2nd shift, must know Lathe, Shaper, and Miller, have own tools. Shift premium, good fringes, no age limit.

TRADEMARK LAWYER

Responsible opportunity in New York law firm for lawyer with 1-4 years trademark background.

YOUNG MEN full or part-time trainees. No experience necessary. Are you over 19 years old and over 5'6" tall, well-groomed and neat in appearance? Here's an opportunity to meet and be with a wonderful group of people, attend dances and parties, become an outstanding dancer and teacher. No experience necessary. Top salaries. Frequent increases. Apply in person, ARTHUR MURRAY STUDIOS.

DINNER HOSTESS

Short evening hours. We will train you. Prefer EastSide resident. Apply in person to Mr. Tonetti, between 11 a.m. and 2 p.m.

FURNITURE DECORATOR
And SALES PERSON

A progressive furniture store needs the services of an outstanding sales person. Store has over 40,000 sq. ft. all on one floor. 10 yr. retirement pension plan, plus other added incentives. Store sells medium priced furniture with leading line of Ethan Allen. Replies will be held in strict confidence.

DISH MACHINE OPERATOR

One day and one night. Better than average starting pay.

PHARMACOLOGIST

A major effort is now being made by Union Carbide in the field of pharmaceuticals. Opportunities are now available at the Bs, MS and PhD levels with plans to continue staffing throughout 1967. Areas of interest include:

BIOCHEMICAL PHARMACOLOGY
CARDIOVASCULAR PHARMACOLOGY
NEUROPHARMACOLOGY

Enjoy the benefits of an industrial research affiliation in an academic environment. Your inquiry will receive prompt and confidential consideration.

ACTURIAL ASSISTANT

Nationally known company offers excellent opportunity to college graduate with major or minor in mathematics. Intent to study acturial science and prepare for Society of Acturaries examinations necessary. Applicant will assist actuary in rate computations, statistical studies, and mathematical analysis. This is a tremendous opportunity to immediately assume professional responsibility and increase your stature based upon your own capabilities. Send complete resume including salary requirements.

Box CE-760, The Wall
Street Journal

MEDICAL TECHNOLOGIST A.S.C.P.
Male or Female

Full time position available, salary commensuate with experience. Excellent fringe benefits. Apply to personnel office.

SUBURBAN COMMUNITY HOSPITAL

LABORERS

Wanted to assist brick mason.

50 hours per week,

total pay approximately $120

CALL BET. 9-5 P.M.--252-2123

JANITORIAL WORK
Part Time

Applicants desired for steady work late eves. 12 p.m. to 6 a.m. Sun. through Thurs. In good health, between 21 and 50. No police record, must drive and have own car.

CITY JANITORIAL SERV. CO., INC.

YOUR OWN COSMETICS BUSINESS

We have MAGIC ALOE. Less than $20.00 starts business. Unlimited earnings. No door to door selling. For free samples and color brochures, send $1.00 for postage and handling.

CARISSA COSMETICS

GO-GO Dancers for afternoon cocktail hour.

The Forty Thieves

* * *

Question: Based on the information in the job ads, what tentative conclusions can you make about jobs in our economy, or about the way they are advertized? EXAMPLES: Many of these job advertisements make a direct appeal to a certain type of pesonality. Can you list some others.

1.

2.

3.

4.

* * * * * * * * * * * * * * * * *

Today's Lesson in Brief

There are many different types of jobs in the American economy. All the workers in these jobs are making a contribution to producing our economy's goods and services. These jobs differ a great deal in terms of employment qualifications, pay, hours, working conditions, and so forth. Some of these jobs will offer you an employment opportunity when you are ready to enter the manpower market.

APPENDIX G

Since everyone who has a job will receive a pay check, it is important to know how it is determined. Some of the methods used for determining wages are hourly, weekly, or monthly, commission, or piece rate. An example of each of these should be given to the class.

The class should first study about social security. Those students that do not have social security numbers should obtain one because for almost every job a person may have they must have a social security number. Use the textbook chapter on social security. Explain the social security benefits and work some problems on calculating social security.

Students should complete a W-4 form (Employee Withholding Exemption Certificate). This form is needed by the employer to determine the status of each employee to determine the amount of taxes to be deducted.

Explain to the class minimum wage laws. Students should learn to calculate problems using the minimum wage per hour for a 40-hour week. Any hours over 40 are considered overtime. Students should also be taught how to calculate overtime pay.

Another deduction from your pay is for income tax. The law requires an employer to withhold an amount from your check to pay your tax liability.

Other items which may be deducted from your pay check are hospitalization insurance, contributions, investments, savings, dues, and bonds.

Following this procedure, the student should be able to calculate take-home pay. Give the student the case problem of Ken Rosenberg to work, then discuss in class.

The "Teaching Taxes Program Materials" may also be used at this time. These booklets may be ordered from the Internal Revenue Service. With these materials, there will be a pamphlet entitled "Careers in Taxation" which explains the many different careers in taxation and where to obtain more information. An excellent resource person would be an accountant to speak to the class.

Taken from Teaching Personal Economics in the Business Education Curriculum, page 22.

CASE PROBLEM

Ken Rosenberg works for a machine tool company. He earns $700 a month before taxes. From that amount there is a deduction of $100 for federal and state income taxes. There is an additional deduction of $27.30 for Old Age, Survivors, and Disability Insurance (OASDI) or Social Security. Mr. Rosenberg also has a $21 deduction from his pay each month for the company retirement fund. Out of his take-home pay the Rosenbergs save $20. They make a payment of $15 a month on Mr. Rosenberg's permanent life insurance policy and another payment of $60 on their car. The remainder goes to pay other living costs.

Duplicate the case problem and give each student a copy. As soon as all the students have had a chance to read the case, have each write answers to the following questions:

1. How much is Ken Rosenberg's take-home pay?
2. How much do the Rosenber's save each month?
3. What items did you include in the savings? Why?
4. Can income tax payments be considered savings? Why?
5. Can OASDI tax payments be considered savings? Why?
6. Can a part of the life insurance premium and a part of the car payment be considered savings? Why?

APPENDIX H

Consumers of Abundance

> There are 60 million consumers households in the U.S. economy. Together they spend nearly half a trillion dollars a year for the purchase of goods and services to satisfy the needs and desires of 200 million Americans. Consumer spending plays an important role by influencing the OVERALL LEVEL of market demand, and by sending "dollar messages" to business firms telling them which PARTICULAR goods and services to produce for sale in the market.

* * * * * * * * * * * * * * * * * *

The American people have been called "the consumers of abundance". A decade ago, one of our country's best-known economists, John Kenneth Galbraith, wrote a famous book entitled "The Affluent Society". (Affluent means "abundant" or "rich".)

Our economy produces food, housing, clothing, cigarettes, liquor, and other goods literally by the tons and megatons. We manufacture millions of automobiles, TV sets, household appliances, and gadgets each year. And we produce transportation services, entertainment, and many other services valued at billions of dollars.

Today, 90% of all households in the United States have a TV set -- and nearly as many have flush toilets and bathtubs or showers! Four out of every five households own a car and have telephone service; 96% have an electric refrigerator; 72% have a washing machine.

In most of the countries in the world, only the richest 2% or 3% of all households are able to own a car and refrigerator and TV set. In the United States, with only 6% of the world's population, we produce and consume between 30% and 40% of the world's output of goods and services. By almost any standard you can think of -- historical, comparison with other countries, or the physiological needs of humans -- we are truly an affluent society and "economy of abundance."

* * *

There is a saying: "The proof of the pudding is in the eating". Our abundance of consumer goods and services is generally considered to be positive proof that our economic system is the most successful in the world. Some economists believe that "the single purpose of all economic activity is consumption"; therefore, the quantity and quality of consumer goods produced is the best standard by which to judge the performance of our economy.

In any case, consumption is a very important part of our economic life. Everyone must consume in order to live. (Some people live in order to consume.) Some people live "higher on the hog" than other people -- that is, the rich have vastly more consumer goods than the poor. We know that within our affluent economy, with all its abundance and wealth, some 30 million Americans sill live in poverty.

* * *

In 1966, there were nearly 60 million consumer households functioning in the American economy. (A household includes all persons who occupy a house, apartment, room, or group of rooms as separate living quarters. A household can consist of one person or a whole family.) Since the population was close to 200 million, the average size of each household was about three and one-third persons. (Divide 200 million people by 60 million households, and the quotient is 3.3 consumers per consumer household.)

How did the 60 million households function in the economy? That is, what do consumers households do in our economy? What functions do consumers perform?

Consumers in 1966 spent $465 billion dollars to buy goods and services. That's an average of nearly $8,000 of consumer spending per household. They spent 45% of this on NON-DURABLE GOODS such as food, clothing, and tobacco. They spent 40% of their consumer dollar on SERVICES such as household operations, transportation, and medical care. And the remaining 15% of consumer spending was for DURABLE GOODS such as automobiles and furniture and household equipment.

Where did the households get the money needed to purchase all these goods and services? Although some of their purchasing power came from past savings, most of it was current income. Total personal income in 1966, for everyone in the country, amounted to $580 billion. Two-thirds of this personal income came from wages and salaries received for work that was done during the year.

Employed workers earn wages and salaries, and then in their capacity as consumers, they spend much of it for the purchase of goods and services. They also pay taxes, save a little, and make other minor outlays. There is an important connection between earning and spending. You can't spend money in the consumer-goods market unless you have money; and the most important source of purchasing power (money) is current income from wages and salaries. A lesson to remember is that consumers are able to perform their spending function only if they have money to spend.

* * *

What are the consequences of consumer spending? When consumer households spend money in the market, they create an "effective demand" for goods and services. They exchange money for goods, and this stimulates business firms to produce more goods. (Note: we are using the term "goods" to include both commodities and services.) In plain language, this means that when businessmen are selling their merchandise, they continue to produce more goods, And this means that workers and other inputs continue to be employed.

Not only does consumer spending create a demand for goods, which stimulates production, which in turn creates employement opportunities. Spending is always for particular goods and services. Therefore, consumer spending in the market provides a system of signals or messages -- telling business firms to produce more of the particular goods and services that consumers say they want, and less of the goods that are piling up on the shelves and in the warehouses. When consumers spend five dollars to buy a blue, size medium, short-sleeve shirt, in effect he is "voting" in favor of continuing the production of blue, medium, short-sleeve shirts. His dollar votes will influence the way resources are used in our economy.

* * *

This brings us to the second major function of consumer households: to obtain goods and services for use in satisfying wants. We have already noted that people must consume in order to live. Now, it is time to note that how we live will be greatly influenced by the quantity and the quality of the goods and services we consume. This is a paraphrase of the food faddist's credo: "We are what we eat". If we spend our consumer dollars for candy, coke, cosmetics, liquor, cigarettes, toy guns, thrill magazines, gadgets, and pills, we create a certain kind of world for ourselves and for our neighbors.

In our affluent society we have the economic power to produce and consume almost anything we choose. We have the freedom, within broad limits, to choose whatever we like. The kind of world we live in will depend to a very great extent on how wisely we choose and how well we use our freedom.

* * *

Questions:

1. How wisely do American consumers use their affluence and freedom?
2. Do we produce the "right" kinds of goods and services?
3. Why is "a good allocation of resources" important to your economic well-being?
4. What are some of the forces that influence the total amount and the particular pattern of consumer spending in the U.S. economy?

* * *

Today's Lesson in Brief

The 60 million consumer households that function in our American economy exert a great deal of influence through their annual expenditures of nearly half a trillion dollars. Consumers perform two major functions: they spend money in the market; and they obtain goods and services for use in satisfying human wants. The total amount of spending, and the particular pattern of spending influence the overall level of output and employment and influence the way our economy's resources are allocated in the production of particular goods and services.

APPENDIX I

Shopping

Taken from Teaching Personal
Economics in the Business
Education Curriculum

CASE PROBLEM

Mrs. Masterson is the mother of five young children. Thursday she makes out a grocery list and studies all the supermarket advertisements. If she is very careful, she can find most of the items on her list at a special price somewhere. Often Mrs. Masterson visits as many as four different supermarkets and spends an entire afternoon shopping. Her husband claims that if she would find the store with the lowest average prices, take advantage of their specials and do most of her shopping there she would be better off

* * *

Divide the class into groups of five or six students each. Duplicate the case problem and give each student a copy. Ask the groups to discuss the case for ten or fifteen minutes. Have each group consider each of the following statements and either agree with it, disagree with it, or change it so that they will agree with it. Have them prepared to give reasons for each decision.

a. Mrs. Masterson is a wise consumer.

b. Mrs. Masterson is foolish, because she has to pay a baby sitter while she shops and also uses a lot of gasoline and time going from store to store.

c. Mrs. Masterson is wasting her time.

d. Mrs. Masterson is accomplishing two purposes at the same time. She is buying economically and having time to herself; which every mother needs.

e. Mrs. Masterson should know all stores "get you on something" sometime.

APPENDIX J

OPINION POLL

	Agree	Disagree	Undecided
1. A large income is essential to security and happiness.			
2. Budgets take the fun out of spending.			
3. Needs and wants are the same things.			
4. Families with high incomes do not need to manage money.			
5. Parents should tell a child how to spend his money.			
6. Family members should decide together how income will be used.			
7. Credit can help families raise their level of living.			
8. Teenagers should have their own charge accounts.			
9. Government protects consumer rights.			
10. Consumers play only a minor part in the success or failure of our economy.			

APPENDIX K

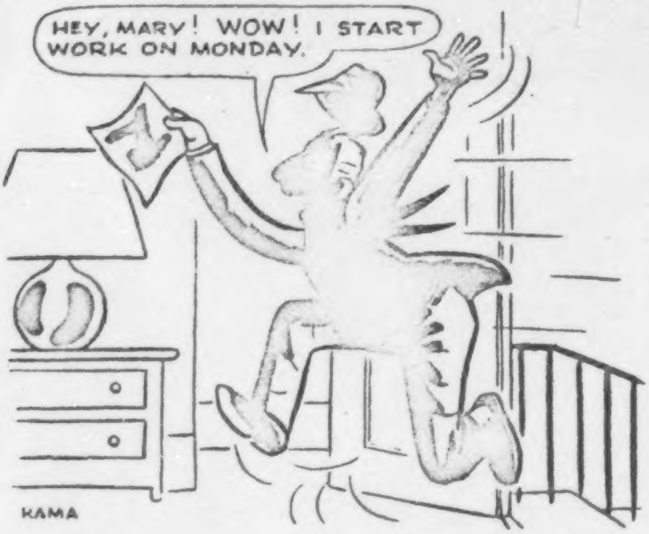
The Joy of Work

One of the most important rewards of work is the sense of personal fulfillment and joy that results from a job that's well done. Learning how to find personal satisfaction from work will help offset the elements of boredom, discomfort, and other negative aspects that every job will have to some extent.

* * * * * * * * *

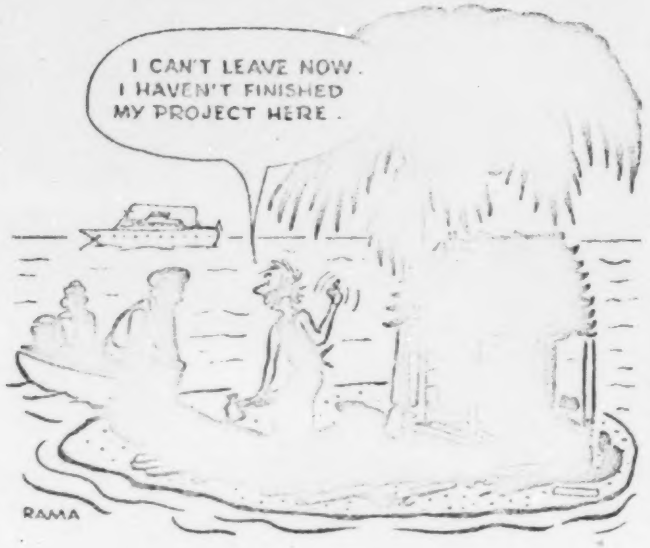
Today's lesson consists of a series of nine cartoons that illustrate some important ideas and attitudes about work and the personal happiness and fulfillment that sometimes come from work. These cartoons appeared in the booklet, Satisfaction Guaranteed, published by The Connecticut Mutual Life Insurance Company, Hartford, Connecticut.

* * *


HEY, MARY! WOW! I START WORK ON MONDAY.
KAMA

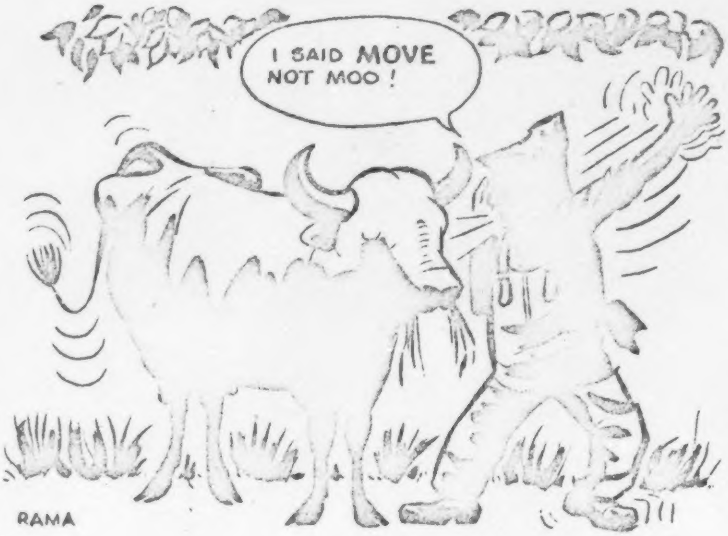
1. OH, WHAT A WONDERFUL FEELING.
Is work just "a necessary evil"? Or is it really "fun"?

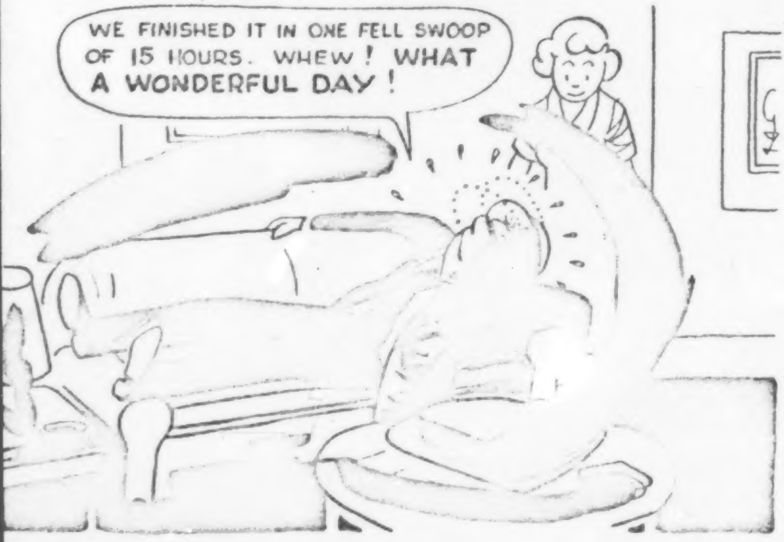
BEST COPY AVAILABLE


I CAN'T LEAVE NOW.
I HAVEN'T FINISHED
MY PROJECT HERE.
RAMA

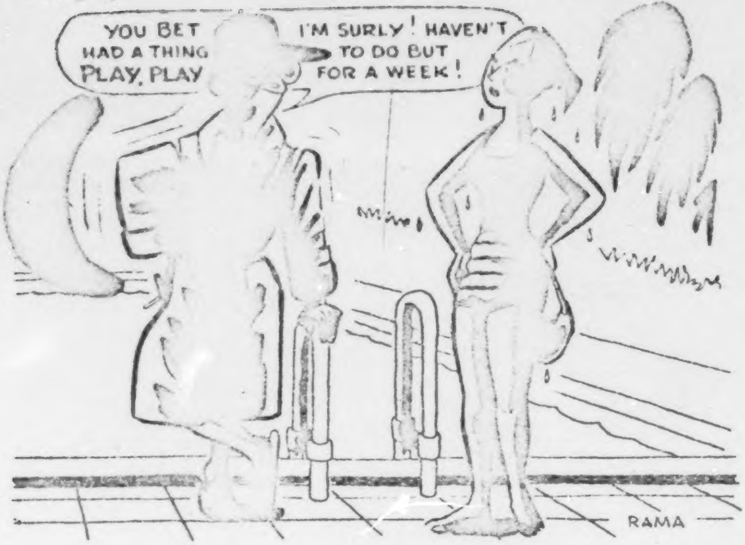
2. AWAY FROM IT ALL.
Have you noticed that when you are absorbed in a job, minor problems and frustrations seem to disappear (at least temporarily)?

3. "HERE, BOSSY".
Work is something ambitious people are willing to do in order to achieve their goals. For those who are satisfied to stand still, Bossy's life seems ideal.


I SAID MOVE
NOT MOO!
RAMA

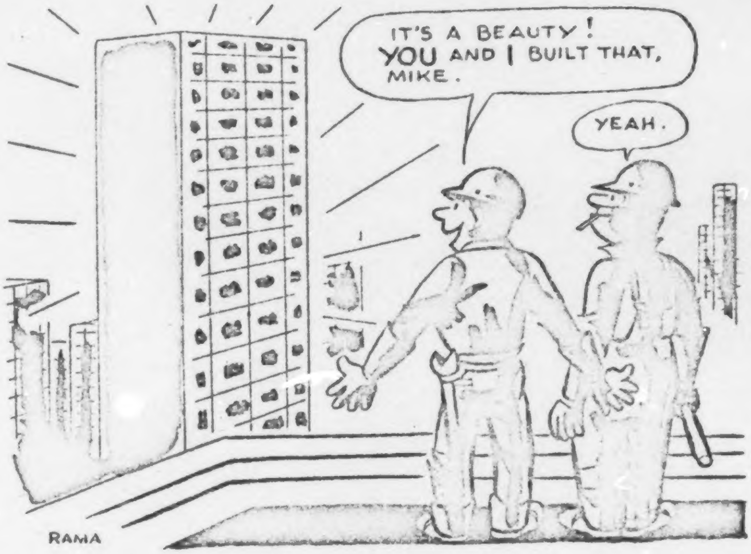

WE FINISHED IT IN ONE FELL SWOOP
OF 15 HOURS. WHEW! WHAT
A WONDERFUL DAY!

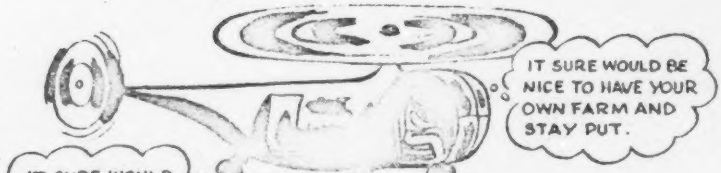
4. THERE'S NOTHING LIKE IT.
If you worked a 15-hour day, do you think you'd be worn out and miserable? Or satisfied and happy with a glow of accomplishment?


YOU BET HAD A THING PLAY, PLAY
I'M SURLY! HAVEN'T TO DO BUT FOR A WEEK!
RAMA

5. CAPTAIN OF INDUSTRY.
Is work simply a means to an end--$$$$? What role did work play in this man's life, before his wife talked him into retiring "to enjoy his money"?

6. WORKMANSHIP.
Do you think there is such a thing as "a human instinct of workmanship"? Who deserves credit for constructing this building?


IT'S A BEAUTY! YOU AND I BUILT THAT, MIKE.
YEAH.
RAMA


IT SURE WOULD BE NICE TO HAVE YOUR OWN FARM AND STAY PUT.
IT SURE WOULD BE NICE TO BE UP THERE FLYING ALL OVER THE PLACE EVERY DAY.
RAMA

7. OLD STORY IN MODERN DRESS.
Is the grass really greener on the other side of the fence? How might the pilot and the farmer satisfy their wishes?

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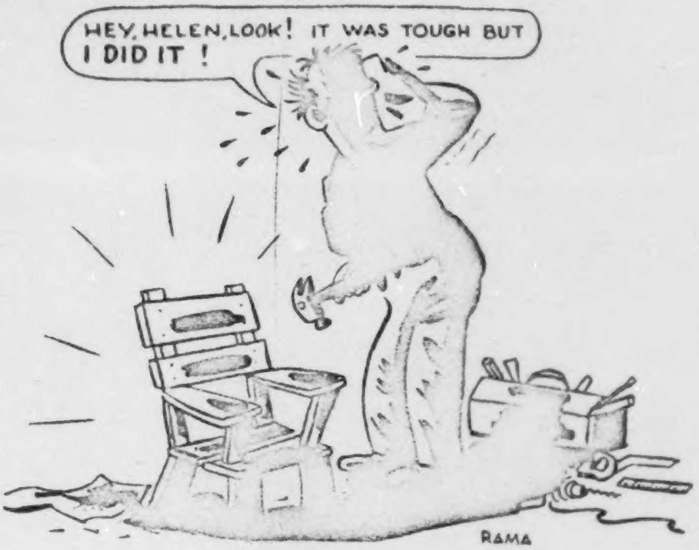
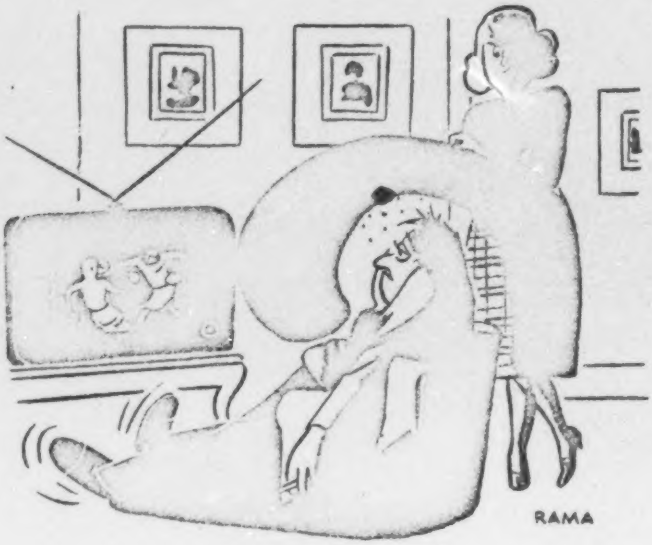

HEY, HELEN, LOOK! IT WAS TOUGH BUT I DID IT !
RAMA

8. AUTHENTIC CHIP-AN-NAIL. After a busy day on the job, why do some people rush to their basement workshop as soon as dinner is over?

9. THE WINNING TICKET. (Fred X. Hustler won $100,000 in the Grand National Sweepstakes.) Is a life of ease really "the good life"? Or was Fred's life more meaningful when he was an active, ambitious salesman?



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Today's Lesson in Brief

The real people and real situations described in these cartoons suggest that work is a necessary part of life and can be a source of personal satisfaction, happiness, and fulfillment.

The Joy of Work

This lesson provides a change of pace -- very informal, unstructured non-statistical, non-rigorous. I's purpose is to suggest early in the course that there are non-economic aspects to work and its rewards. Try to stimulate as much discussion as possible, and encourage both serious and humorous response. This can be a morale-builder as well as a subtle low-pressure introduction to the non-financial side of work's rewards.

Use the comments in the student lesson, following the cartoon titles, as hints for questions to ask the students. Ignore them or discuss them, as you prefer. The reference "instinct of workmanship" in #6 anticipates lessons #29 and #38 on the psychology of work that come later in the course. The term is from Thorstein Veblen's book (first published in 1914) and refers to an assumed "human propensity for activity tailored to the efficient achievement of a goal." See pp. 9f of "Psychological Dimensions of Work," CFEE Technical Paper #2, 1967.

Some additional questions you might consider asking your students are: What non-economic satisfactions can you derive from a job? (See lessons #29 for answers) Which of these types of non-economic rewards of work are most important to you? Why? What types of work do you think will give you the most non-economic satisfaction? Why?

Encourage students to bring cartoons, photos, and other materials to class throughout the course to illustrate various aspects of work, economic and otherwise. You might post them on a bulletin board.

APPENDIX L

Are Today's Skills Good Enough for Tomorrow's Jobs?

> In the dynamic economy of the United States, change is always taking place in the number and nature of jobs in the manpower market. Technology and other forces cause some old jobs to disappear while creating new jobs. The changes that will take place in the manpower market during your lifetime will mean that you are likely to have three, four, or even more entirely different types of jobs during your years of employment. Continuing education and training will be necessary to keep your work skills up to date, so you can take advantage of changing employment opportunities.

* * * * * * * * *

In many cases, your parents did not have the opportunities for education and training that are available to young people today. Yet, many have been able to get and hold jobs without a great deal of additional education or training. Can you safely assume that "what was good enough for Mom and Dad will be good enough for me"? Don't bet on it!

The future will be different from the past. Our labor force is changing rapidly in composition and the amount of education and training that every type of worker has is increasing. However, because of the rapid nature of change in our labor force, it's hard to predict the exact type of education and training that will provide you with the specific skills needed for the jobs of the future. The fact is that not even the panel of vocational education experts set up by the President of the United States* could answer the question: "What skills should people be trained for so they can be usefully employed 10 years from now"? We have reached a point in our economic life where we can't really tell whether a given form of training will carry a man or woman as much as 10 years in time.

* * *

Let's look at the future of education and training for our changing labor force through the eyes and voice of a girl named Susie. The story could very well concern itself with Joe, Pete, or Bill because what happens to Susie in tomorrow's manpower market could happen to the boys in this class as well as the girls. As you read this case, ask yourself:

1. What would I do if I found myself in Susie's situation?
2. What "mistakes" did Susie make?
3. How can I avoid the situation that Susie is in?
4. Who (or what) is to blame for what happened to Susie?

* * *

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*A 24-page summary of the Panel's 1963 report, Education for a Changing World of Work, was published by the U. S. Government Printing Office.

Susie, a ninth grade student in Everytown Junior High School, in the Spring of 1969 had come to the office of Mr. Collins, the school's guidance counselor, to discuss her high school program for next fall.

In talking to Susie, Mr. Collins recalled that Susie's mother had asked, "What's going to happen to Susie when she gets out of high school? Is she just going to be pushed into marriage because she has nothing better to do? I hope she has a chance to work out her own future and take time to decide what she wants to be."

With this in mind, Mr. Collins said, "You know, Susie, around here one of the best jobs a girl can get is in an office. In this town we need people who can type and keep books and manage offices. If you take the commercial subjects, I don't think you'll have any trouble getting a job when you graduate."

"Well, that sounds all right," said Susie. "What do you think I should take?"

"You are required to take English, social studies, and physical education. You could also take some home economics, and of course typing, shorthand, and bookkeeping." So they laid out a program in which about a quarter of her high school time would be spent on commercial subjects.

Three years pass, and in 1972, Susie graduates. Now her parents say, "We don't think you should get a job yet. You ought to go to junior college."

So Susie goes to junior college. There she spends about a third of her time on commercial subjects. She is good at them, and she likes them. Her spirit and her willingness to learn make her well liked by her teachers and a genuine credit to the college.

Two more years go by, and in 1974 she graduates and takes a job with the J. B. Jones Insurance Agency. Here, too, Susie turns out to be a real whiz. At the end of the first month she gets a raise, and at the end of the second, another.

And then one day Mr. Jones runs into the president of the board of education at a Rotary Club luncheon. "Hey, Joe," he says, "I must have been wrong about your schools. I always thought you guys were a bunch of parasites living off American business, but when I see what that Susie is doing in our company--well, she's the best girl we've ever hired for that sort of work. Believe me, friend, if you're turning out people who can perform like that, you can count on old J.B. to help you out when you need it."

Joe is delighted and hunts up the superintendent. "Jack, did you hear what old J.B. Jones is saying about us?" he asks, and tells him the story.

"That's interesting. I have a letter here which I just received from that girl's folks." He reads:

"DEAR DR. SMITH: We want you to know that we think the wonderful adjustment our daughter has made comes directly from the things you and your school did for her. We wish there were some way we could help to make this possible for other children. If there is anything we can do to support your program, please do not fail to call on us."

Months go by. Susie gets more raises. She is successful and happy.

Then she meets "him." She is now 20 years old; it is 1975. She falls in love and decides she wants to get married.

But Mr. Jones says, "Now, Susie, don't do anything rash. You've got a good job here, with an excellent future. Don't throw it away."

Susie is not the kind to do anything too quickly. She waits a whole year. Then she gets married. After her marriage she continues to work. She enjoys working for the insurance agency and the company continues to value her as an employee. But after a little while there is a baby on the way, and Susie tells her employers she will soon have to stop work. Time passes, and eventually she quits work to become a full-time housewife and mother. She is 22 when Johnny is born in 1977.

Susie has two more children, the last born when she is 26. Two years later Johnny starts to school. Susie does not really miss him because the other children keep her busy. But another 4 years go by and (in 1987), when she is 32, the last child enters school.

Now Susie finds that she has more free time. She thinks about getting a job and talks to her husband about it, but he says, "No wife of mine has to work. Why don't you join a church group or a bridge club?"

She does join a bridge club, but decides playing bridge is not a worthwhile pastime and gives it up. She takes on a Scout den, but doesn't like it. She joins a church group and for a while does volunteer work at the Y, but she finds nothing she honestly likes to do. She becomes restless and unhappy.

More years pass, and suddenly a crisis looms which none of them had seen coming. Johnny enters high school. This was not unforseen, but with Johnny actually in high school things seem different. His future education looms nearer. Susie tells her husband, "Johnny ought to go to college. If he does, we're going to need about $2,000 or $3,000 a year more than we make now. And the other two are coming on. Don't you think I should get a job?" It is now 1989. Susie is 34 years old.

Susie goes back to the Jones Agency to try to get her job back. Old J.B. is dead, so she introduces herself to the new boss and says, "I used to work here about 13 years ago."

He says, "Well, that's wonderful. What can you do?"

"I can keep books."

"Keep books? Did they hire bookeepers in your day? We don't keep books in this office; that work's done on a machine. This is 1989!"

"Well, I can take shorthand."

"Did they hire stenographers in your day? I always thought that was done with dictating machines."

"I can type."

"We use the voice typewriter now."

"Well, I can manage an office."

"Look, Susie, do you see those six women in there? Each of them has 20 years seniority with this company. Quite literally, they are charity cases. The only reason those women are here is because they have seniority. Any one of them could manage this office with one hand."

"Then what can I do?"

"Can you program a computer?"

"What's that?"

"Can you use binary numbers?"

"What are they?"

"Susie, are you educated?"

"Of course I'm educated! I went through junior college!

"Well, you don't sound as if you are. Maybe you'd better look into that."

So Susie goes to the college and tells them she finds she needs more education. She wants to get her bachelor's degree now.

The admissions office looks up her records. "You know," he says, "We don't teach those commercial subjects any more. It's good that you took typing. We don't credit typing courses, but we require all students to type everything. Our professors don't have time to try to figure out their handwriting. However, I'm not sure we could admit you to this college now."

"Do you mean I can't get back into college? I've already had 2 years. Here, I've got a certificate which says I graduated from this very school."

"Yes, but this college isn't the same as that college was. Students are required to prove their ability to study our courses. They take entrance exams in communication, both spoken and written, and in science and mathematics. There is also an examination on general background knowledge. You can arrange to take the exams next month."

Susie is shocked. It has been a long time since she has taken any examinations. But she wants to continue her education, so she signs up. When the grades come, though, her spirits fall. She passes the communication test by the barest margin. She fails to get high enough scores on the math-science and on the general background examinations. The admissions office tells her that she will have to study at night school to prepare for later tests.

"You mean I have to go back to high school? Why, that's foolish," and she storms out, saying to herself, "I don't see how I could get into a mess like this. I'm going back to see Mr. Collins."

Mr. Collins is living in retirement. But when he answers Susie's ring, he recognizes her immediately. "Susie, it's wonderful to see you. Come in. What brings you here?"

"Mr. Collins, I'm in deep trouble. I don't see how I can work it out." She tells him her problem. "How could anyone have such a wonderful start and end up in such a mess?"

The old man nods. "Susie, I want to show you something." He gets up and takes her across the room to show her a framed letter hanging on the wall. Susie reads it:

"OCTOBER 1, 1974.

"DEAR MR. COLLINS: I've just had my third raise. I want you to know that I think all my success comes directly from what you and your school did for me. I am so deep in your debt that I could never repay you.

"Gratefully,

"SUSIE."

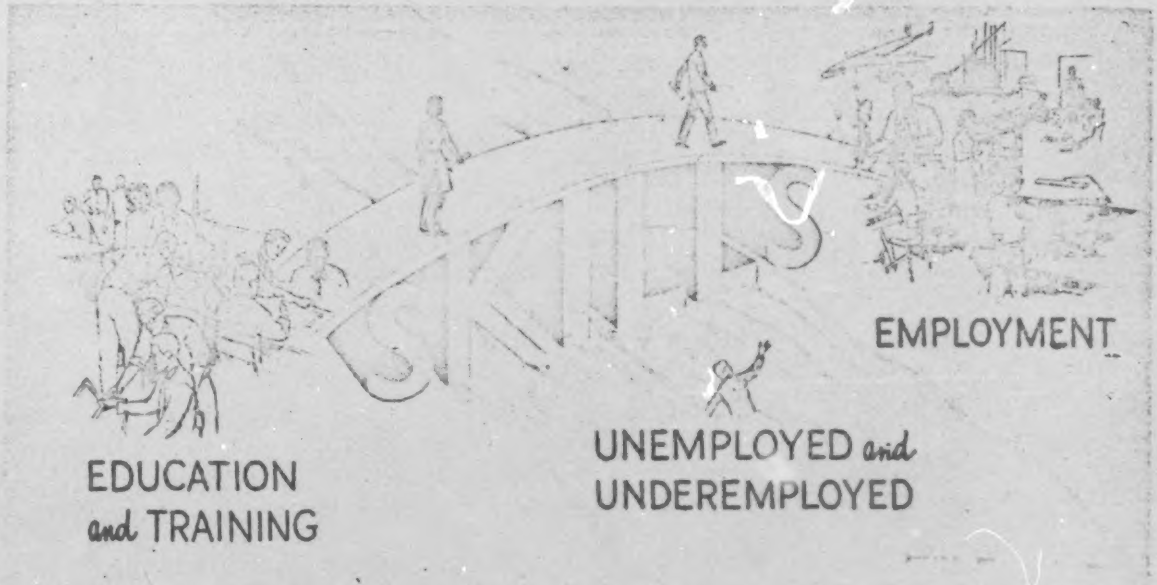
* * *

What did you learn from Susie's case? That middle-aged women will have difficulties in the future getting back into the labor force, (or even into school)? That present job skills may become obsolete? Susie's situation may have made you aware of the need for additional and continuing education to avoid becoming an "obsolete human resource." (After all, new machines and equipment are required by industry as technology advances. In the same way, the economy needs human resources with new skills and know-how.) To obtain the skills that you'll need to compete for tomorrow's jobs, continuing education will be essential. This continuous education and training will require your time and energy and in some cases, your money. (Remember -- there's no free lunch.) But the result of continuing investment in your own skills and abilities will be to increase greatly your chances for continuing success in the manpower market.

* * * * * * * * *

Today's Lesson in Brief

Many of today's specific occupational skills will not be good enough for tomorrow's jobs. Each man and woman entering the manpower market in the 1970's can expect to have three or four or even more different jobs during his productive lifetime. Only through continuing education and training can we prepare ourselves to meet the challenge of change in the world of work.



Are Today's Skills Good Enough for Tomorrow's Jobs?

Because of the length of this lesson, you might assign it the day before and let the students read it outside of class. Or, you could present Susie's story as a class play.

Answers to Discussion Questions (on page one of the lesson)

1. Answers would vary among students.

2. Answers could vary a great deal among students in class. Some that might come up are: Susie should have planned better, continued her education, not married so young and left the labor force, kept in better touch with the changing employment requirements, gotten a "broader" education which would not become obsolete so fast, or not ever tried to go back to work.

3. Plan. Get a good education and training in broad, as well as specific skills. Continue your education and training, and be aware of changes in employment opportunities.

4. Blame is difficult to assess. Susie is responsible for her own job career and cannot, nor should not, try to place the responsibility elsewhere.

Extra Discussion Questions

1. "At Cape Kennedy, knowledge is accreting so fast that a portion of every day must be spent learning the total of what one's colleagues discovered yesterday. This process is so important that it's estimated that after a lapse from this learning process for as long as eight weeks, the individual would be obsolete, and of no further use to the space effort." (Dr. Carlton M. Singleton, Deputy Director, Appalachia Educational Laboratory, NEWSFOCUS: AEL, Vol. I, No. 7, June 1, 1967. COMMENT.)
Suggested answers: Will vary among the students.

2. "What general skills do you think will be useful for tomorrow's jobs?"
Suggested answers: Communication, computation, manual dexterity, and group organization (dealing with people). These skills have a high "transfer" value in that they are valuable in most jobs now and in the future. Lesson #54 discusses these skills.

Background readings

Mangum (ed.), THE MANPOWER REVOLUTION, 1966, pp. 395-416.

Gardner, SELF-RENEWAL, 1965.

APPENDIX M

FIELD TRIP INFORMATION SHEET

Name____________________

Date____________________

1. Location of field trip____

2. List five things you are to look for and learn through this field trip.

____

____

____

____

____

3. What occupations did you observe during the field trip?

____

____

4. List anything you learned about any of the occupations listed above as a result of the field trip.

____

____

5. Do you think the field trip helped you to learn more about occupations?________________

6. Would you like to go on a similar field trip?____________________________

7. The most worthwhile feature of the field trip was________________________

____

APPENDIX N

GUEST SPEAKER EVALUATION WORKSHEET

Name____________________

Date____________________

1. Did the speaker use words that you could understand?____________________
2. Did he/she make the subject interesting?____________________
3. List some things you learned from the speaker____________________

    ____

    ____

    ____
4. What could the speaker do to make the presentation more effective?____________________

    ____

    ____
5. If you have other speakers, what subject would you like to have them talk about?____________________

    ____

    ____

GENERAL BUSINESS

SELECTED REFERENCES

PRINTED MATERIALS

Business Careers Kit, Careers, Inc., 1972

"Career Development K-12," (Levels III & IV), Public Schools of Anne Arundel Co.

"Careers in Taxation," U.S. Treasury Department

"Department Store in the Classroom," Consumer Information Services

General Business For Economic Understanding & Teacher's Activity Guide, South-Western Publishing Co.

"It's Up To You," Institute of Life Insurance

Jobs: An Updated Look into the Future, Changing Times Education Service

"Journey Through a Stock Exchange," American Stock Exchange

Manpower and Economic Education, Joint Council on Economic Education

"Popeye and Business and Office Careers," King Features

Teaching Personal Economics in the Business Curriculum, Joint Council on Economic Education

Teaching Taxes Materials, U.S. Treasury Department

"Using Retail Credit," Consumer Information Service

FILMS

"How to Lose Your Best Customer," Northwestern Bell Telephone

"Merchant to the Millions," Association-Sterling Films

"Report to Consumers," Modern Talking Picture Service

"Retailing Careers," Modern Talking Picture Service

FILMSTRIPS

"Buyer Beware," Guidance Associates

FILMSTRIPS CONTINUED

"Cabbage to Kings and Various Things," Bowmar

"Careers in the Computer Field," Popular Science Audio-Visuals

"Making Ends Meet," Guidance Associates

"Money Tree," Bowmar

"Money Well Spent," Guidance Associates

"Personality in Business," Popular Science Audio-Visuals

MISCELLANEOUS AIDES

The Credit Game, Leswing Communications--Simulation game

Marketplace, Joint Council on Economic Education--Simulation game

Life Career, Western Publishing Co., Inc.--Simulation game

Teletrainers, Northwestern Bell Telephone

ACKNOWLEDGEMENTS

General Business For Economic Understanding & Teacher's Activity Guide

South-Western Publishing Co.
355 Conde St.
West Chicago, Ill. 60185

Manpower and Economic Education

Joint Council on Economic Education
1212 Avenue of the Americas
New York, NY 10036

TYPEWRITING--INTRODUCTION

Typewriting is a valuable skill. It is valuable in the sense that it can be used to earn money either in a professional capacity or on a part-time supplemental basis, as well as being used for personal purposes.

The typewriting instructor faces a unique challenge with every student. In skill courses, students often reach a plateau which causes discouragement and restlessness. This discouragement and restlessness can be alleviated by creative ideas and exceptional implementation on the part of the teacher.

As a fun suggestion, the instructor can use "Thought Starters" which are short compositions as a variation from the textbook. Students are free to express themselves and their feelings about the work world as well as practice their typing skill. A practical approach to typing, the teacher can use the Employment Unit so the students will know the correct form and procedures to be used in applying for a position. Students will also be able to explore job opportunities open to the skilled typist. If available in the community, the instructor can use speakers and business machine demonstrations to increase student interest and knowledge of careers.

Typing can be fun and also a valuable work skill with a creative, enthusiastic teacher.

OBJECTIVES--PERSONAL TYPEWRITING

1. Introduce students to a variety of careers.
2. Students will be able to type an application letter, personal data sheet, and a thank-you letter.
3. Determine student's attitudes concerning themselves and the world of work through composition.
4. Expose the students to the modern equipment being used in offices.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Employment Unit	Students will be able to type in correct form an application letter, personal data sheet, and a thank-you letter.	Type the problems in the book, then have the students compose and type their own.	South-Western Textbook Personal Typewriting page 192-196.
Thought-Starters	Provide an opportunity for composition work.	See Appendix A	
Timed Writings, composition and centering	Typing activities that deal with the self concept.	See Appendix B for materials to be used for centering composition, and timed writings.	Paper by George Behrendt Seymour, WI
Machine Display	View new equipment used in offices.	Explain new equipment used in modern offices, the job possibilities as a salesman or a repairman.	
Speaker	Explain their job and the requirements needed to enter this field.	Some of the possible speakers are: supervisor or office manager, clerk typist, legal secretary, medical secretary, court reporter, or temporary work agency.	
Careers-Typing Book	Introduce students to a variety of careers.	Use this book for timed writings, manuscript typing, and for composition work.	South-Western--Timed Writings About Careers
Extra Credit Work	Develop extra credit work for students who are interested in an office career.	Report on an office career	Business Career Kit Fargo (Whittier Library)

Subject Personal Typewriting

Grade Level 9

APPENDIX A

THOUGHT STARTERS

1. When it comes to pay, women should...
2. People really want to work because...
3. Young people need...
4. Compared to my father, my chances of getting a better job are...
5. A high school diploma means...
6. Success is...
7. We work because...
8. Education is...
9. Honest work is...
10. The only reason people work is because...
11. Loyalty in a job is...
12. Being helpful means...
13. An employer looking at my attendance would think...
14. Work is...
15. Labor unions are...
16. Automation is...
17. I would not care what my job was as long as...
18. Most American workers are...
19. The worker is the person who...
20. Concerning a job, it would be hard to...
21. Mothers with small children should not work because...
22. Unemployment means...
23. If someone gave me all the money I needed, I would...

THOUGHT STARTERS
(cont.)

24. Workers are paid what they deserve...

25. People who are unemployed are...

26. The best job goes to the person who has "pull"...

APPENDIX B

CONCEPT: An understanding and acceptance of self is important throughout life.

Words
Everybody needs friends. Friends are people who like 10
to be with us, who are interested in us, and who like 20
to do the things we like to do. A real friend is always 31
ready to help us and be kind to us. A real friend makes 42
us feel wanted and appreciated. Friendship needs two 53
people, each one willing to do his share. A person can- 64
not make friends if he always wants his own way, never 75
wants to help anyone, is envious if a person has some- 86
thing that he does not have. Friends are people who 97
cheer you up when you are sad, help a person with his 108
work, listen to your troubles, share good times with 119
you. Friendship helps us to become better people. It 130
helps us to see the beauty in other people's lives. 141

Directions: 3 minute writing - 50 space line - No paragraph indentions - double spacing - (Emphasis - Control)

CONCEPT: Persons need to be recognized as having dignity and worth.

YOU ARX IMPORTANT

Whxn you arx txmptxd to takx a day off without notifying your managxr, and you think that thx absxncx of onx pxrson won't makx too much diffxrencx, you placx your managxr in thx samx position as a fxllow trying to typx with onx kxy missing. Hx can makx substitutions just as wx havx donx but thx result is nxvxr thx samx as whxn hx's working with thx right pxoplx on thx right jobs.

Directions: A fill-in. Day before vacation - shortened class period.

CONCEPT: Persons need to be recognized as having dignity and worth.

Words

You know that man and animals are alike in many ways. Both 12
have parents and families. Both have senses of smell, touch, 24
hearing, sight and taste. They both eat and sleep, move and grow, 37
and reproduce themselves. 42

Certain animals can even do some things better than man. 53
A deer can run faster. A lion is stronger. A dog has a keener 64
sense of smell. A cat can climb trees more swiftly. 74

But you can do things no other animal or living creature can 85
do. These actions make man unique, different from all other 97
creatures and far above all animals. Man can think, and man can 109
live. Man can choose what he wants to do. 118

People can learn from experience, from what they have done 130
or what they have seen others do. People can change their way of 142
living if they want to do so. Animals cannot. All their lives, 157
animals follow the instinct within them. A robin builds the same 170
kind of nest every Spring. A cat chases rats. A rabbit eats 182
carrots, lettuce and other plants. The rabbit will never decide 194
to build a nest, nor will the cat want a carrot. An animal's 207
life is always the same. He lives according to his instincts. 219

You are free to plan your life. You can learn anything you 231
really want to know. You can enjoy something different to eat 244
every day. You can move from a cold country to a warm country to 257
live. You can build any kind of house you want. Man can choose 270
many, many different occupations. 277

Directions: 5 minute writing - 60 space line - 5 paragraph
indentions - double spacing

CONCEPT: Education and work are interrelated.

Words

The greatness of America is that more people have achieved the good 14
things of life than anywhere else in the world today or at any time in 28
history because of the countless opportunities that exist for the person 42
who is ready and willing to work. A person's responsibility for his own 57
life is fundamental in a free, civilized society such as ours. In the 71
world of work, your own work skills and talents are the best guarantee 85
that you can secure a job when you need it. To an ever-increasing degree, 100
work skills are based on a sound education; and, because the problems of 115
unemployment are greatest among individuals with the least skill, a suit- 130
able education is the best single investment you can make in your own 144
future. 145

In school, your teachers are interested in you as an individual and 159
as a student. They are interested in helping you achieve your potential. 174
In the world of work, an employer will be more interested in what you can 188
produce in return for the salary that you command. Your opportunities 203
for advancement in the world of work will be quickly enhanced if you will 217
recognize that a promotion will necessitate a resolute attempt on your 232
part to utilize your talents. Employers want alert workers who can get 246
a task finished when it needs to be done, who can work under pressure 260
when the need arises, and who can add something extra to the job. 273

Directions: 5 minute writing - 70 space line - 5 space paragraph
indentions - double spacing

CONCEPT: Work means different things to different people.

Composing at the typewriter.

In a short paragraph, type your understanding of the work done by the following people.

1. Dan Devine
2. An astronaut
3. Bart Starr
4. A TV repairman
5. Ricky Nelson
6. A farmer
7. A secretary
8. A doctor of surgery

CONCEPT: Career development requires a continuous and sequential series of choices.

Words

Even though you may be in only the ninth or tenth grade, it is not 14
too early to begin thinking about your eventual career. Whether you se- 28
lect business or some other area, typing skill will prove valuable to 42
you. Should you select office work, ability to type will be essential. 56

Your teachers or a guidance counselor can give you very valuable 69
information about the various kinds of jobs, specific work requirements, 83
and the size of salary you may expect as a beginner and to which you may 98
aspire. There are also good books about careers you may want to read. 112

An excellent way to begin exploring career fields is to work after 125
school or during the summer. This is a safe, yet quick, method of find- 140
ing out whether a certain kind of activity is to your liking. Just as 154
crucial, it offers you an opportunity to discuss careers with others. 168

Directions: 5 minute writing - 70 space line - 5 space paragraph indentions - double spacing

CONCEPT: Occupational supply and demand has an impact on career planning.

Words

In the period of the 70's the labor force will grow from 85 million 14
in 1970 to 100 million in 1980, a growth element of about 17.6 percent. 28
The female labor force will grow virtually 23.4 percent, from 30 million 43
to 37 million. The teen-age work force will grow 11 percent, but there 57
will be a dramatic expansion in the labor force in the 25-34 years age 71
category. The array of workers in this age area will grow by 49 percent. 86
The overall tally of white-collar workers will continue to grow. It 100
will be roughly 50 percent higher than the overall number of blue-collar 115
workers; yet the latter group will jump from 29 to 31 million. 127

The number of farm workers will decrease from 4.2 million to 3.2 140
million by 1980. It is forecast, too, that the number of government 154
workers will grow from a tally of 9.1 to 13.8 million at the state and 168
local levels, and from 2.7 to 3.0 million at the Federal level. There 182
will be about 21.1 million workers in what may be termed the professional 197
area; 5.5 million in the building area; 4.6 million in the finance area; 212
20.5 million in what may be termed the trade area; 22.4 million in produc- 226
tion; 0.6 million in the mining sector; and 5.3 million in all other areas. 241

Directions: 5 minute writing - 70 space line - 5 space paragraph
indentions - double spaced - (Emphasis - numbers -
eyes on copy, million is used 16 times)

CONCEPT: There is a wide variety of occupations which may be classified in several ways.

CLERICAL

Office manager
Secretary
Court reporter
Insurance agent
Travel agent
Stenographer
Bookkeeper
Office machine operator
Teletype operator
Typist
Library technician
Tape librarian
Office boy or girl
Data-processing

Key punch operator
General office clerk
Insurance clerk
Correspondence clerk
Bank clerk
Shipping clerk
Switchboard operator
Receptionist
Stock clerk
Hotel clerk
Grocery clerk
Messenger
File clerk

The jobs at the beginning of each list require the most training; those at the end of the list, the least.

Directions: Center in 3 columns with 10 spaces between columns. Use the backspace-from-center method. Double spacing. Center problem vertically. Center heading a triple space above columns, in all caps.

PERSONAL TYPEWRITING

SELECTED REFERENCES

PRINTED MATERIALS

Timed Writings About Careers, South-Western Publishing Company

ACKNOWLEDGEMENTS

Portions of Mr. George Behrendt's paper were included in Appendix B

Mr. George Behrendt
Business Education Teacher
Seymour, WI

NINTH GRADE CAREER DEVELOPMENT

The intent of this unit is to provide relevant exploratory experiences to the 9th grade students. Within the unit, there is a synthesis of efforts from guidance, career education, and general education. The CASES committee believes it is possible to refrain from further talk of vocational education versus academic or college prep education. Our challenge is to deal with the whole student and his development.

This career unit was structured to cover a 9-week period. The committee realizes that the various junior high schools differ in the amount of time alloted for their career units. We would encourage the individual instructor to carefully analyze this unit for the purpose of determining which sections should have the greatest emphasis and which sections may possibly be omitted, if time should not permit the unit to be taught in its entirety. Since the career awareness unit is being carried out in specified areas of the 7th and 8th grades, a building meeting is a must so as to communicate areas of concern, to know what areas other courses are dealing with, and to guard against overlap.

It should be pointed out that this unit was developed for the convenience of the instructor and should be utilized in any way which would most adequately achieve the objectives he/she has for teaching a unit in career development. Suggestions from the various instructors and administrators involved with this unit are encouraged.

A GUIDE TO SELF AND CAREER AWARENESS THROUGH

SOCIAL STUDIES

Grade 9

Prepared by

Allan Johnson

OBJECTIVES

The following main objectives are incorporated as sections within the career unit.

I. The student will become involved in the purpose of the unit specific requirements and the various methods to be used.

II. The student will become more aware of himself through self appraisal and self understanding, establishing a self profile and to become knowledgable with terminology.

III. The student will relate school to Occupational Planning, relating skills, knowledge, and habits of self to future developing a plan for high school with a counselor.

IV. The student will find his role in our economic system, his relation to production, distribution and consumption.

V. The student will understand the concept of exploring job clusters; and will investigate and research jobs involving work with Data,People, and Things.

VI. Exploring jobs primarily involving work with Data; what is data, importance in todays' and tomorrows' society, school subjects to take.

VII. Exploring jobs primarily involving working with People; relationship of careers involving working with people, requirements, skills needed, school subjects to take.

VIII. Exploring jobs primarily involving work with Things; what is meant by "working with things', jobs of this nature, school subjects to take.

IX. Students will do in-depth study of careers that interest them so far, (area A) AND area B plan ahead by reviewing educational needs, techniques locating, acquiring, holding, and succeeding in a job.

Section I Student Involvement

Topic or Unit	Objective #1	Career Related Instructional Activities	Resources Materials
time allowed 1/2 period	The student will write about his tentative occupational plans.	The first full period of class will involve students in thought and activity as related to their goals and the goals of the course. Assign a short theme to be written on paper furnished by the instructor. It shall be entitled: MY OCCUPATIONAL GOAL: WHY AND HOW I PLAN TO ATTAIN IT. This will be completed in class during the first meeting. The brief essay will provide insight into each student's thinking about his future. (At the end of the vocational unit, the same theme will be assigned as one means of evaluating the student's progress inrealistic,tentative occupational goals.	The instructor, after having read the assigned essays, should return them to be put in their three-ring notebook.

Subject SOCIAL STUDIES

Grade Level 9

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective #2	Career Related Instructional Activities	Resources Materials
	The students will learn the purpose of the course, its general content, the methods to be used, and specific requirements.	Teacher and class discussion 1. Purpose of the unit 2. Overview of each of the sections to be covered 3. Overview of the methods to be used in the unit (this will differ with individual teachers) Films, tapes, video-tapes, small group discussion roll playing, individual projects, field trips, student interviews, simulation games, etc. The outline, if used, should then be retained in the students notebook Time Allowed ---- 1/2 period	A general purpose outline is included in APPENDIX A Students will put this in their three ring notebooks

Subject Social Studies

Grade Level 9th

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective # 3	Career Related Instructional Activities	Resources Materials
	Students will start to become familiar with the words and phrases that will be used and become more apparent as they move on.	The instructor can introduce the list of vocabulary words. This list is divided into four different sections The different sections may be assigned to the students on a long term basis, say a week before these words will be comin up in class discussion, student projects, movies, etc. Section A should be assigned immediately as these words will be dealt with first. Section B should be assigned a few days before you discuss values, Section III. Section C should be discussed in class before students begin research projects. Section D should be presented prior to and during discussion of Section IX on Planning Ahead. Time Allowed --- 1/4 period	The list of vocabulary words and phrases are in APPENDIX B - Section No. A

Subject Social Studies

Grade Level 9th

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective # 4	Career Related Instructional Activities	Resources Materials
	The student will gain knowledge about our economic system and its manpower needs as it relates to the individual	A sample pretest is included in APPENDIX C Use the pretest to lead into class discussion. The following trends are examples for discussion also. A. Average person's life span of work if 40-50 yrs. B. Technical advances may shorten the life working span in the future, thus making leisure time activities more important. C. More women are working for longer periods of time D. Approximately 1/3 of today's working force is composed of women. E. Over 90 % of the married women today have worked in gainful employment at some time or another after marriage. F. Constant training and/or retraining will be required for occupational survival. G. Because Americans are moving more, there is a necessary adjustment of the labor force. H. We are gradually moving toward equal employment opportunities regardless of race, crede or sex. Time Allowed --- 1 period	Pretest APPENDIX C Pretest and list of trends to become part of the student notebook

Subject Social Studies

Grade Level 9th

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective # 5	Career Related Instructional Activities	Resources Materials
	Students will gain knowledge about our economic system and its manpower needs as it relates to the individual.	Continue from previous page. One ormore of the following suggested class or individua activities may be useful as an on-going individualized or class process: A. Have students estimate the work life span of their fathers or themselves. B. For the students first interview using the APPENDIX D, have them interview their own parents to gain knowledge of the world of work. C. Survey class to see how many working mothers are represented. Lead into discussion on values, standard of living, etc. D. Have students make a brief report on new careers related to the space industry and ecology. E. Student and/or teacher bring to class for discussion and display, newspaper and magazine articles, government publications dealing with the trends in the world of work. Time Allowed --- Continuous Throughout This Unit	See APPENDIX D for the parent interview sheet

Subject Socail Studies Grade Level 9th

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective # 6	Career Related Instructional Activities	Resources Materials
	The students will learn appreciate, and verbalize the importance and dignity of all kinds of work.	Role Playing (1 period) 1, Hand out dittoed sheet, APPENDIX E 2. Direct the students to list these occupations by number in order of presitge and importance to society. A class consensus list can then be put on the board. 3. Have a general discussion as to the daily activities of each one of the 30 listed occupations. Role Playing (1 period) 1. Have students number off 1-30. 2. Assuming it is a working day in Sioux Falls, direct the students that they will role play the particular occupation their number falls by. Remind students of the activities that were discussed yesterday. Students should associate with others in the community. 3. Teacher should take a number also so as to lead off the role playing. Students will find it hard to loosen up. 4. Role playing will last about 7 -12 min. In the middle, tell the class that it is coffee break time. 5. After coffee break, remove the following numbers from the game. 2, 7, 14, 15, 19, 25, & 28. CONTINUED - NEXT PAGE .	See APPENDIX E for the list of jobs to be used in role playing game. Must have copies for each student as they will be writing on them

Subject Social Studies

Grade Level 9th

Section I STUDENT INVOLVEMENT

Topic or Unit	Objective # 6	Career Related Instructional Activities	Resources Materials
		6. After letting the role playing activity continue for awhile longer without the above players, stop the game and have everyone return to their seats. Following questions may be used for discussion: 1. Any general reactions to the game? 2. How dependent were some of you on others in the community? 3. What happened during the coffee break? Can all people who work go for a break when ever they want? 4. What would happen if in a real community, the occupations that were removed from the community were on strike or did not exist? 5. A general discussion can follow as to the necessity for all workers, and the dignity of each and every vocation. Time Allowed --- 2 periods	

Subject Social Studies

Grade Level 9th

Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective #1	Career Related Instructional Activities	Resources Materials
	The student will become aware of the terminology used for self-understanding and job selection.	Suggested Implementation 1. Use of resource person, see Resource Materials 2. Class discussion over vocabulary words in APPENDIX B, Section B. 3. Have students plan bulletin boards, posters, collages, or other displays depicting the path one takes in self-understanding. Follow-up and/or culminating activities 1. Show filmstrip "Developing Values", both parts I & II. Good to present in place of the listed resource person; or as review and follow-up. Time Allowed --- 1 period for each item above	See vocabulary list APPENDIX B, Section B Mr. Adair Callison, Director of Pupil Personnel Services, has consented to spend a day in class differentiating and identifying the following: 1. Aptitudes 2. Interests . 3. Values 4. Personality Traits 5. Physical Assets 6. Achievements Guest speaker evaluation worksheet, APPENDIX F Filmstrip: "Developing Values" (AreaSchool IML)

Subject Socail Studies

Grade Level 9th

Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Each student will compile a profile of himself which will help him understand and evaluate his strengths and weaknesses.	1. APPENDIX G includes short form personal data sheet sample. 2. Teacher and/or student may want to write out a profile of himself with respect to the six factors used in objective #1 on the previous page. 3. A more open-ended self-evaluation and self-understanding form (see APPENDIX H) is excellent for general class discussion and completion. Any of the above should become a part of the student's notebook. (It should be noted here that not all of the above items should be used, but only what will fit your students and class situation) Time Allowed --- 1 period/item	See APPENDIX G for short form personal data sheets to be used together or seperately. See APPENDIX H-1, and H-2 for another type of self-evaluation form.

Subject Social Studies

Grade Level 9th

Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective #3	Career Related Instructional Activities	Resources Materials
	How would someone else appraise and evaluate the student in qualities desired by an employer.	The following is a list of characteristics which employers desire: Dependability Promptness Efficiency Helpfulness Cooperativeness Loyalty Good attendance Courtesy Leadership Perserverance Reliability Initiative Neatness Have a general discussion as to the meaning of these words. 1. Assign the students to fill out one of the forms on himself. 2. One form will be filled out by the student's favorite teacher in junior high. 3. Have the student take one form out into the community. The form should be filled out by such people as babysitting neighbor, minister, coach, etc. Time Allowed --- 15 - 20 min. for discussion	See APPENDIX I for evaluation forms to be used Three for each student is desired, see instructional activities

Subject Social Studies

Grade Level 9th

Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective #4	Career Related Instructional Activities	Resources Materials
	Students will learn the extreme importance of good grades and attendance.	See APPENDIX J for group work in the way of a game. Students must bring some information with them. For this reason, the teacher should assign this information 2-3 days in advance. Assign pupils a number . Have students fill out APPENDIX J, NO NAME, just using their number. Divide students into groups of 4-5, pass out sheets which students have filled out, and have the group decide which person they would hire, and which person they would definetely not hire. (for a Chemist) The class can then come together to decide the top 10 of the group which would be hired and the bottom 5 which would not be hired. Time Allowed --- 1 period	See APPENDIX J

Subject Social Studies

Grade Level 9th

Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective#4 cont	Career Related Instructional Activities	Resources Materials
	Students will learn the extreme importance of good grades and attendance.	Discussion which naturally can follow this activity: 1. How important is each of the categories? 2. Which do you feel is the most important? 3. Should grades and attendance be given equal importance? 4. How did your group finally decide the best person to hire? Time Allowed --- 1 period	The attendance record the students filled out should become a part of their notebook as a reminder to them.

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Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective#5	Career Related Instructional Activities	Resources Materials
	The student will realize how self-understanding can help him acquire the skills knowledge, and the attitudes needed to get along better with himself and with others.	The following questions are suggested for terminating the section on self-appraisal and self-understanding. These may be somewhat difficult at first to discuss, but don't give answers, get the students to really think and discuss these questions. 1. What basic knowledge is needed by any person for success in a job and in our society? How can this be acquired? 2 What skills are needed by any person for success in a job and in our society? How can this be acquired? 3. What attitudes are needed for jobs and for societal living? How can these be acquired? 4. What habits are needed for success in any job and success in our society in general? 5. Why does a student get along better with himself if he understands his own strengths and weaknesses? 6. Why does a student get along better with others if he understands himself better? Time Allowed --- 1 period	Each student should have their evaluative forms and tally sheets before them

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Section II SELF-APPRAISAL & SELF-UNDERSTANDING

Topic or Unit	Objective #5 cont	Career Related Instructional Activities	Resources Materials
		7. The filmstrip "Jobs and Gender" may be shown at this time to show how job stereo-typing is diminishing. A discussion of jobs which women are now entering as never before and jobs men are engaging in which women only worked in before could preceed or follow the filmstrip.	Filmstrip: "Jobs and Gender" (Area School - IML)
		8. Discuss the Newsweek article "The Job Blahs: Who Wants to Work"	Newsweek: March 26, 1973. Whittier has 90 copies of this article for those who wish to use it.
		Time Allowed --- 2 periods	

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CULMINATING ACTIVITIES FOR SECTION II

Evaluating a student's progress in this session presents special difficulties. While knowledge of terminology and concepts can be measured by teacher made tests, it is difficult to measure the amount of self-insight acquired, except through observation of performance in carrying out the class assignments and activities. The following suggestions may give the teacher ideas on ways to do this:

1. Have students assemble and turn in a special project notebook containing all the material he has gathered about himself, his profile, class notes, and other written assignments pertaining to the section. Some of these may have been previously checked by the teacher and returned to the student.

2. Give a test covering terminology and concepts.

3. The class might develop their own crossword puzzle covering pertinent terminology (other than the one in APPENDIX T).

4. Have the students start planning a parent's night and program to be conducted by students. Include a display of students' work on notebooks, posters, collages, short talks by students on ideas covered in the section and their value. Some enterprising student might come up with an original comedy routine.

The sort of activities in item 4 could be done towards the end, but should be planned well in advance.

Section III RELATING SCHOOL TO OCCUPATIONAL PLANNING

Topic or Unit	Objective #1	Career Related Instructional Activities	Resources Materials
	Students will be able to compare and relate skills, knowledge, attitudes, habits of at least one elective course to salable skills in a future job.	Students and teachers jointly compile a list of elective courses available in school during 7, 8, & 9th grades.	Teachers in required and elective subject areas would be willing to share information and materials that would lend itself to this area
		Have students prepare a bulletin board, window display, or poster illustrating the numberous related occupations and opportunities related to one of their favorite subjects (required or elective). They can obtain assistance from the teachers of that subject in collecting material information for the display.	
		Oral reports about careers related to an elective course can be presented in the class, with the teacher's permission.	
		Take a field trip to an industry or institution employing many workers in a diversity of occupations and observe and inquire about skills and education workers need for their job.	See APPENDIX S for field trip observation sheet
		Time Allowed --- continuous	

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Topic or Unit	Objective #2	Career Related Instructional Activities	Resources Materials
	The student develops or reviews through individual or group conferences with the school counselor, his educational plans for high school and the future.	This activity can be worked very well with the school counselors. This period can be used by counselors to introduce materials for registering for high school. Counselors can reach every 9th grader by being in Civics class one day. Students can ask general question about registering, educational needs, course offerings, summer school, etc. This would also give counselors the opportunity to get some pre-registration cards, etc. filled out and also give students opportunities to sign up for a counseling session if so desired. Time Allowed --- 1 period	This activity must be planned well in advance with the counselors to ensure timing and counselor cooperation.
	#3 The student will gain the realization that there is an endless list of resources that students may draw upon for assistance.	By brainstorming or buzz group discussions, have the students develop a list of people, places, and materials at the school, community, state and national levels they can consult for assistance and information in their areas of interest or job clusters. This activity is very hard to get started. It may be started in large groups then broken down into small groups having members of the small group helping each other. Have the students save their lists for future reference. Time Allowed --- 1 period	

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Section III RELATING SCHOOL TO OCCUPATIONAL PLANNING

Topic or Unit	Objective#4	Career Related Instructional Activities	Resources Materials
	Students will contact a person in the job that they are now interested in and interview him.	See APPENDIX K. -- Challenge the students to find on their own, if possible, one person they can interview to see what kind of educational preparation he/she recommends for this type of work. Give students the opportunity to make the phone call during the class time on a rotating basis, even to the point of allowing students to leave school to conduct the interview with these persons. Time Allowed --- 1/2 period	The list the students made out in objective #3 will help give them ideas about who to contact. APPENDIX AAA has a sheet that would be very helpful for students to have.
	#5 Students will learn some of the educational possibilities open to them after high school which are available in Sioux Falls.	Invite representatives of the following institutions. Students can gather around that representative which they may have some interest in. 1. College (Sioux Falls College & Augie) 2. Junior College (Worthington) 3. Armed Forces 4. Business School (Nettleton) 5. Vocational School (SEAVTS) 6. Labor (unions & apprenticeship) Students can usually take in at least two of the above representatives during one class period. Time Allowed --- 1 period	A phone call or personal visit to any of the listed institutions would bring a representative

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Topic or Unit	Objective #5 cont	Career Related Instructional Activities	Resources Materials
		Follow-up activity to the previous days resource people Using the groups that the students put themselves in yesterday in listening and asking questions of the representatives, show the following filmstrips to the groups that they pertain to. Group #1. College Bound - Series of slides and recordings showing college as it is and requirements Group #2. Armed Forces - Show films which are obtainable from any of the recruiters. Group #3. Business School - Filmstrip: "So Your Not Going To College". Group #4. Vocational School - Video-tape: "Apprenticeship Training" #710002 Group #5. Labor - Filmstrip: "On The Job: Four Trainees" Have the students report and share with the class some of the highlights of their individual group audio-visual aids. Time Allowed --- 1 period	College slides and recording - Doug Noteboom, Augie Armed Forces films (Recruiting Office) Filmstrip: "So Your Not Going To College" Guidance Associates (Area School - IML) Video-tape: "Apprenticeship Training" #710002 (LSHS TV Studio) Filmstrip: "On The Job: Four Trainees", Guidance Associates, (Area School - IML

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Section IV. - THE INDIVIDUAL'S ROLE IN THE ECONOMIC SYSTEM

Important considerations before planning section IV:

Section IV deals with the American economic system. If the teacher decides to implement this section, some conditions, possible consequences, and choices should be considered as follows:

1. In the sequence that the Career Unit is presently set up in section IV, dealing with the individual's role in the economic system, falls naturally into place after sections I, II, & III. It follows naturally then that section V, which acquaints the student with the "cluster" concept, and sections VI, VII, & VIII, which deals with in-depth study of careers according to the clusters, should in deed be preceeded by section IV.

2. If this economic unit is presented at the place it appears, there is the danger of loosing the student's train of thought in the area of careers.

3. Since most 9th Social Studies teachers seem to cover the economic unit last in the school year, it would be a natural sequence to take the enclosed economic section after the career unit.

The individual teacher has the decision as to when to place the economic unit into the curriculum depending upon the particular class situation.

Section IV - THE INDIVIDUAL'S ROLE IN THE ECONOMIC SYSTEM

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	Thestudent will become acquainted with the concepts related to Production, Distribution, and Concumption	Assign the following questions to individuals or groups who will be responsible for finding answers and sharing them with the class. a. What is economics? b. How do the basic needs of man differ from the wants of man? c. How is the system organized to meet these needs? d. What is production? What economic activities and jobs are involved in it? e. What is distribution? What economic activities and jobs are involved in it? f. What is consumption? What economic activities and jobs are involved in it? g. How are production, distribution, and consumption dependent on each other? h. Why is the consumer called the "king" of our system? i. How do changes in production influence demand for certain kinds of workers? j. How do changes in consumer tastes or needs affect changes in production? k. How does a scarcity of workers in an occupation affect wages? l. How does a scarcity of workers affect production costs? m. How does a scarcity of workers ultimately affect prices? n. How does an abundance of a product affect price? o. How do manufacturing industries differ from service industries?	It should be remembered that the Covocs text American Civics has some fine units that go along with these questions.

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Section IV cont.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
	The student will realize the role of government in our economic system.	Possible questions for discussion: a. What is government? b. Who decides what services will be provided by the local, state, and national governments? c. How are these services financed? d. What are the major kinds of taxes that are used as revenue to support government services? e. What effect do these taxes have on the net operating cash of individuals? f. What effect do these taxes have on the net operating cash of businesses? g. What percentage (approximately) of out own family total income is paid in taxes? h. What kind of services do tax dollars buy for our citizens? i. Do you feel the people of the U.S. want more of fewer government services now and in the future? j. What implications do the expansion of government hold with respect to future job opportunities? k. What percentage of our citizenry now works either directly or indirectly for the government, either federal, state, or local? l. What check and balance system is used to insure careful spending of tax maney? m. What is meant by "private enterprise"? n. How does our government control private enterprise o. How does government spending affect the private economy? Time Allowed --- 5-7 periods	Some of the included questions are repetitious of government units already studied. However, to keep the students mindful of the role of government in economics and the world of work, these areas should be covered.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IV cont.	The student will investigate his role as a consumer.	Through small group discussions, list items to be included in a personal budget. Prepare a sample budget for two people that is appropriate for the beginning salary in a perferred job. Prepare a sample budget for a family of five. Consider this budget in relation to the median salary in the field tentatively selected for a career. Possible questions to consider: a. What are some of the factors to be considered in deciding on which product to buy? b. Where can consumers find information or help in deciding on which product to buy? c. What effect does advertising have on consumer tastes and buying? d. What techniques are used to entice consumers into spending their money? e. What programs are being developed by the government and businessmen to protect consumers? Compare and contrast: a. Financing charges of installment buying b. Revolving charge accounts. c. Credit union borrowing. d. Bank borrowing. e. Loan company borrowing. f.. Long and short term borrowing.	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IV cont.	Culminating activities for section IV	Since the original overall objective of this section was to explore economics only to the point that students could use terminology to verbalize concepts they will need to know to make wise educational and occupational decisions, the culminating, and/or evaluative activity can be as simple as: 1. Reviewing responses on worksheets to draw out main ideas. 2. Writing an essay or giving a short talk to show the relationship of economics and occupational planning. 3. Completing a bulletin board of news articles, pictures, etc., and endless other devices that can be used to demonstrate student learning.	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V	Preparing students for in-depth career study, job clusters, Data, People, & Things concept, and an introduction to sections VI, VII, VIII.	Section V deals with two concepts, that of "job clusters" and "Data, People, & Things". We as Social Studies teachers owe the students a period of time when they can see for themselves the logically related fields open to them. Area A deals with the concept of job clusters, whereby discussion, presentations, class activities and competitive game are utilized to enable the student to grasp the diversity of careers. Area B using the Dictionary of Occupational Titles, (D.O.T.) introduces the concept of looking at jobs through Data, People, & Things and how all jobs fall in one of these categories. The planning of the next four sections is based on the assumption that it is best to familarize students with a variety of ways with which to look at occupational fields. It is important for the instructor to familarize himself completely with sections VI, VII, & VIII before he makes any definite plans at this time.	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont. Job Clusters and Careers	Students will start to familarize themselves with clusters.	After handing out lists of job clusters, hold a general discussion as to the value and contents of the job cluster sheets. Time Allowed --- 1 period	APPENDIX L Section ~~C of vocab~~ulary.
	Students will work with job clusters	Have students bring the "help wanted" ads from any newspaper. (This should be assigned well ahead of time so as to be sure all students will have want ads) Students will cut out job want ads and glue them according to clusters. Time Allowed --- I-2 periods	Inexpensive typing paper such as used in the typing classes. Glue and sticks Sissors Rags to clean mess These sheets will become part of the student's notebook

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont Job Clusters and Careers	Students will associate every job they can think of with one of the 15 clusters	List the fifteen clusters across the top of the chalk board. Challenge students to list as many jobs they know of under the correct cluster. Some jobs will surely be brought up that could fall under several clusters. Instructors should not become to "picky", but list the occupation that are hard to classify under several clusters. Time Allowed --- 1-2 periods	
	Students will use knowledge gained in clusters in competitive activity	The accompanying APPENDIX M provides a list of random jobs for the students to match with clusters. One method is to divide students into groups and have them compete to see which group can finish first with the least amount of errors. A package of life-savers for the winners, to be eaten in class, will motivate all to perform to their best ability. Time Allowed --- 1/2 period	APPENDIX M

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont Data, People & Things	Students will start to become faliliar with the Dictionary of Occupational Titles	Teacher must arrange for adequate resources for the career study by: 1. Obtaining the Dictionary of Occupational Titles (D.O.T.) for class reference 2. Ascertaining that there is an adequate supply of other occupational information available fo student's research, develop a file to use in directing students to the resources. Suggested Implementation: 1. Outline to the students, plans for work to be covered in sections VI, VII, & VIII, dealing with Data, People, & Things. 2. Show the filmstrip "Choosing Your Career", part I which introduces and explains the concept of Data, People, & Things. 3. In order to explain the necessity for classifying jobs and their functions, point out that there are more than 22,000 different occupations listed in the D.O.T. Further point out the diversity of jobs by spending a few minutes reading several listings, or all the areas of work as listed in the D.O.T. Students can also learn the impossibility of studying each job individually. Volume II, page 217 of the D.O.T.lists the areas of work. Explain what is meant by the term "area of work" and read those areas in the D.O.T. 4. Define the terms Data, People, & Things as they are used in the D.O.T. (see page 649 in D.O.T.)	Dictionary of Occupational Titles Filmstrip: "Choosing Your Career" Part I, Guidance Associates, (Area School - IML)

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Time Allowed --- 3 periods

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont Data, People, & Things	Students will learn to interpret the D.O.T. numerical coding system and to use the D.O.T. system in finding occupational information.	Give students an independent study assignment. Unless there are enough D.O.T.s available for small-group work in class, the assignment will have to be done on a long-range basis outside of class. Include such problems as: a. Pick one "area of work" listed that interests you. What is it? b. List the subdivisions and the occupational code number of each. c. Which of these specific "fields of work" interest you the most? d. What kind of information is included on the specific "field of work" you have chosen to investigate? e. Notice that the information you looked up in "d" above includes a list of specific occupational titles related to that field of work. Select one of these titles for further investigation. Name this occupational title and give its code number. f. Now turn to Volume I of the D.O.T. Look up the occupational title you selected in "e" above. g. Does the above definition tell which industries might employ workers of this type? If not, try to figure it out for yourself by referring to the "Industrial Index". h. Look up the industry you named in "g" above. Is the occupational ti tle which you selected listed? Read the list of other occupational titles listed under this industry to discover what other types of workers you would be working with.	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont Data, People, & Things		i. Using the occupational code number for the job selected in "d", interpret the meaning of each digit in the code. j. The last three digits refer to the level of involvement required by that occupation in relation to dat (4th digit), people (5th digit), and things (6th digit). a. Does the occupation you selected and explained in "i" primarily involve working with data, people, or things? k. Where elese could you go for information on this career? They can share, through individual reports, information on careers they discovered during their worksheet investigations. They should take notes on the reports of others. Students could prepare a bulletin board or poster showing how many different occupations one type of industry employs. Time Allowed --- 2 periods	D.O.T.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section V cont Data, People, & Things	Students will use their knowledge of the D.O.T. classification.	Either on the board or on paper, prepare a chart with 20 D.O.T. areas of work listed at spaced intervals down the left-hand side. Divide the paper vertically into three columns labeling them "Data", "People", and "Things". By competition or as class review, place some appropriate jobe titles in the resulting boxes. Culminating Activity for Section V Hopefully, this section will make students eager to get into individual research. Therefore, other complicated activities may be impediments to this and result in getting them sidetracked. The teacher should use his own judgment about diversions. Possibilities include: 1. Have competition by groups in looking up some occupational titles in the D.O.T., or in putting code numbers on printed occupational information and filing it. 2. Read common occupational definitions and have them guess the job titles. 3. Develop a game similar to "What's My Line" by bringing people in or having a student role play an occupation. Time Allowed --- 1 period	

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Sections VI, VII, VIII

The instructor and students have some choices and decisions to make depending upon how the instructor has dealt with research before, and how your materials are catalogued, and what the instructor feels comfortable with.

The following ideas are some ways by which research may be handled in the individual class rooms.

1. Students could do research in any number of clusters or stay in one cluster. The teacher should ascertain that the student knows himself well before directing his attention to one specific cluster.
2. Students may want to explore several clusters, but only areas of work that involves things, as opposed to data or people.
3. The instructor may require students to do research on one job under each category of data, people, or things.
4. Any combination of the above.

SECTIONS VI, VII, & VIII ARE TO BE COMPLETED BEFORE RESEARCH BEGINS

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VI Exploring jobs primarily involving work with "data"	The student will gain a general understanding of the relationship of "data" work within our economic system.	The filmstrip "People Who Organize Facts" is to be shown first to explain the concept of Data. This filmstrip is very good at showing the diversity and many varieties of jobs that fall within the Data and/or Fact area. The following can either be used before or after the filmstrip and/or as a presentation or class discussion 1. What is meant by "Working With Data"? 2. Do not all jobs involve some use of data? 3. How do the D.O.T. numbers indicate the jobs primarily involving working with data? 4. How important are these jobs? Time Allowed --- 1 period	Filmstrip: "People Who Organize Facts", Guidance Associates, (Area School - IML)

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VI cont.	Students will identify specific requirements and skills needed for working with data as a primary function.	Possible questions to be dealt with in class: a. What kind of jobs involve comparing data? b. What kind of jobs involve copying data? c. What kind of jobs involve computing data? d. What kind of jobs involve compiling data? e. What kind of jobs involve analyzing data? f. What kind of jobs involve coordinating data? g. What kind of jobs involve synthesizing data? h. What type of training does data work require in general? i. What school subjects, which you are taking now or could take in high sch-ol, provide training for data work? j. Where is training offered beyond high school for this kind of work? Assign oral reports on data work investigations. Have a speaker whoe job involves data work come to class and discuss the skill and training needed for his job. Discussion can be centered on topics such as: a. What type data jobs are found throughout S. Falls b. What data jobs are unique to the area of S. Falls Discuss the post-high school (SEAVTS) offerings in this catagory. Visit the Southeast Area Vocational School and see first hand the type of program being taught. Time Allowed --- 2-3 periods	See page 649, Vol II of the D.O.T. for a discussion of this terminology.

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VI cont.	The student will investigate changes now taking place in this field of work and compare the opportunities in "Data" work, with those in other facets of employment.	Suggested Implementation: 1. Among the class activities planned around the questions in this objective, it would be desirable to make a field trip to see a computer with its programmers and operators at work. 2. Have students bring in and report on news clippings or articles dealing with demands for certain kinds of data workers. Possible questions: a. Refer back to the chart developed in section V to see what sample occupations you listed in each of the twenty areas of work which involved data. Judging by the occupations listed, would you say there is growing or declining demand for data workers? Why? b. What technological advancements have contributed to the need for data workers, in spite of the fact that such machines have made working with data easier and faster? c. What are some data occupations that are in great demand? d. What do you think the future holds for those who work with data? What evidence have you found that supports this opinion?	

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Time Allowed --- 21/2 periods
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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VI cont.	The student will evaluate personal interests in this category in relation to other knowledge of himself.	Suggested Implementation: Have students refer to their notebooks on "Self Understanding" from section II especially their personal profile sheet. Assign each student to reappraise his interests, aptitudes, and potentials in the data category to his own individual occupational research to see if his interest has increased or decreased as a result of what was learned through study and exploration. Have students discuss their reasons for having changed interests. Give careful attention to such factors as: a. importance of the occupation to society b. type of occupation involved c. education and training required d. method of entry and opportunities for advancement e. earnings and benefits f. working conditions g. personal goals and values Time Allowed --- 2 periods	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VII Exploring jobs primarily involving work with "People".	The students will gain a general knowledge of the relationship of careers involving working with "people" in the economic system.	The filmstrip "People Who Help Others" is to be shown first to explain the concept of "People". This filmstrip does an excellent job of showing the many occupations involved in working with people. The follwoing can either be used before or after the filmstrip and/or as a presentation or discussion. 1. What is meant by "working with people"? 2. Do not all jobs involve some work with people? 3. How do the D.O.T. numbers indicate that jobs primarily involve working with people? 4. What are some jobs of this nature? 5. How important are these jobs? Time Allowed --- 1 period	Filmstrip: "People Who Help Others", Part I, Guidance Associates, (Area School - IML)

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VII cont.	The students will identify and explore specific requirements and skills needed for working with people as a primary function.	Possible questions to be dealt with in class: a. Define: serving, speaking, signaling, persuading, diverting, supervising, instructing, negotiating, monitoring. b. What kind of working-with-people jobs involve serving? c. What kind of jobs involve speaking & signaling? d. What kind of jobs involve persuading? e. What kind of jobs involve diverting? f. What kind of jobs involve supervising? g. What kind of jobs involve instructing? h. What kind of jobs involve negotiating? i. What kind of jobs involve monitoring? j. What kind of general training do jobs involve working with people? k. What school subjects, which you are now taking or could take in high school, provide such training? Have a speaker whoe job involves working with people come to class and discuss the skills and training required for his career. Discussion can be centered on topics such as: a. What type people jobs are found throughout Sioux Falls? b. What people jobs are unique in the Sioux Falls area? Time Allowed --- 2-3 periods	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VII cont.	Students will investigate changes taking place in this field of work and compare the opportunities in jobs working with people to those in other facets of employment.	Suggested Implementation: 1. Have students bring in and report on news clippings or articles dealing with demands for certain kinds of workers in occupations involving working with people. 2. Invite persons in this type of work to speak to the class and explain their job. 3. Plan other class activities around these questions: a. Refer back to the chart developed in section V to see what sample occupations you listed in each of the twenty areas of work which involved working with people. Judging by the occupations listed, would you say there is a growing or declining demand for these workers? Why? b. What are some other occupations involving working with people that are in great demand? c. What do you think the future holds for workers with people? d. How does our growing population affect the need for this kind of worker? 4. Arrange for a "people" orientated resource person to discuss the changes in people jobs during his career. Time Allowed --- 2 1/2 periods	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VII cont.	The student will evaluate his personal interests in this category in relation to other knowledge of himself.	Suggested Implementation: After referring again to their personal profiles developed in section II, have each student reappraise his interests, aptitudes, and potential in the "people" category, especially in relation to information gained from his own individual occupational research. Has interest increased or decreased as a result of the study and exploration? Assign discussion, oral and/or written, of reasons for changing interest patterns. Time Allowed --- 2 periods	

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VIII Exploring jobs primarily involving work with "things".	The student will gain a general knowledge of the relationship of careers involving working with things to the economic system.	The filmstrip "People Who Make Things" is to be shown first to explain the concept of "things". This filmstrip opens up many of the occupations that deal with people making things. The filmstrip can be shown fefore or after the following questions. The following can either be used as a presentation or as a class discussion. a. What is meant by "working with things"/ b. Do not all jobs involve some work with things? c. How do the D.O.T. numbers indicate that jobs primarily involve this kind of work? d. What are some jobs of this nature? e. How important are these jobs? Time Allowed --- I/2 period	Filmstrip: "People Who Make Things", Guidance Associates, (Area School - IML)

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Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VIII cont.	The student will identify and explore specific requirements and skills needed for working with things as a primary function.	Possible questions to be dealt with in class: a. Define the following terms which apply to working with things: handling, feeding-offbearing, tending, manipulating, driving-operating, operating-controlling, precision working, setting up. b. What kind of jobs involve handling? c. What kind of jobs involve feeding-offbearing? d. What kind of jobs involve tending? e. What kind of jobs involve manipulating? f. What kind of jobs involve driving-operating? g. What kind of jobs involve operating-controlling? h. What kind of jobs involve precision working? i. What kind of jobs involve setting up? j. In general, what kinds of training are needed for jobs involving work with things? k. What school subjects, which you are now taking or could take in high school, provide such training? l. Where is training offered beyond high school for this kind of work? Have a speaker, whose job involves working with things come to class and discuss the skills and training needed for his job. What type of things jobs are found throughout S. Falls? What things jobs are unique to the Sioux Falls area? Time Allowed --- 2-3 periods	

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Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VIII cont.	The student will investigate changes now taking place in this field of work and compare opportunities in jobs working with things to those in other facets of employment.	Suggested Implementation: Have students bring in and report on news clippings or articles dealing with demands for certain kinds of workers in occupations involving working with things. Bring in people in this type of work to speak to the class. Plan other activities around these questions: a. Refer back to the chart developed in sectionV to see what sample occupations were listed in each of the twenty areas of work which involved working with things. Judging by the occupations listed, would you say there is a growing or declining demand for these workers? Why? b. What technological advances are affecting the demand or lack of demand for people who work with things? c. What are some occupations in this category that are growing? d. What are some occupations in this category that are declining? Arrange for a things oriented speaker to discuss the changes in things jobs during his career. Time Allowed --- 2 1/2 periods	

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section VIII cont.	The student will evaluate personal interests in this category in relation to other knowledge of himself.	Suggested Implementation: After referring again to their personal profiles developed in section II, have each student reappraise his interests, aptitudes, and portntial in the "things" category. Has interest increased or decreased as a result of what was learned through study and explorations? Students should discuss, in writing and/or orally, their reasons for having any changed interests. Time Allowed --- 2 periods	

Subject Social Studies

Grade Level 9th

Section IX RESEARCHING OF JOBS & PLANNING AHEAD

Section IX can be dealt with in two differnt ways. Whichever way the instructor chooses would depend a great deal on how he and his Civics department handles research on occupations.

It is after sections VI, VII, & VIII are completed that individual research should begin. Straight research, day after day, can and does become boring to the student, even to the ones really interested.

Therefore, section IX, area B, on planning ahead can be cone in class on the days that students are not doing research. Of course if the instructor desires to do so, all of the student research (area A) may be completed before going on to area B.

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Researching for jobs and planning ahead. (Area A	Students will do research on the occupation that interests them at this particular time.	Suggested Implementation: The teacher must arrange in advance for adequate resources for career study by: 1. Obtaining the D.O.T.s for class references. 2. Ascertaining that there is an adequate supply of other occupational information available for student research. 3. Hand out to each student or put on the board, the requirements you have decided upon. (number of jobs, in what areas, number of days allowed for research, any deadlines, etc.) Time Allowed --- 1 1/2 periods	
		What ever guide, outline or questionnaire the instructor chooses for the students to follow in their research, it should be gone over very carefully in class before going to the library.	APPENDIX N & O include sample research outlines
		The first time students are directed to do research in the library or wherever, either the teacher, the counselor, or the librarian should explain the system of cataloguing the resources. The system should be gone over very carefully so that the students can find information without difficulty.	The teacher may want to have a group of students or the class make up its own outline to be used in the research project.

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Area A cont.	The instructor will follow each and every student in his research and try to be of service in decision making and solving the problems the student comes up against.	The following suggestions serve as a guide as the students do their research. 1. The guide or outline used for research should be gone over several times so the students understand the procedure thoroughly. 2. If there are deadlines to meet, students should be informed of the dates and then reminded periodically throughout the research unit. 3. If the outlines are to be turned in to the instructor for reading and grading, there should be some systematic way of doing this daily. 4. Students want and need up-to-date feedback, therefore it is essential that student research be read and returned to the student by the next class period. 5. Invite the librarian, counselor, or other staff to visit when research is being done. They can be of great help and you can not do it all alone.	

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Planning Ahead (Area B)	Students will learn the importance of using references.	Assign the vocabulary words from APPENDIX B, Section D. Discuss the word "references". What does it mean? Do you really need references? Who are the people we can use as references? Who could you get as references? Emphasizing that references are very important in obtaining a job, the people involved should be asked to be used as references before their names are submitted. Assign the students to come prepared for the next class with three or four references. Instruct the student that these references should include the following: a. Education - teacher, coach, principal b. Church - minister, priest, Sunday school teacher c. Neighbor or friend of the family d. Present or former employer e. Banker When securing a reference person, you should not include any relative or persons below the age of 18. Time Allowed --- 1/2 period	APPENDIX B, Section D

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX cont. Area B	Students will learn effective techniques to be used before, during, and after personal interviews.	The instructor can deal with Personal Interviews in two ways, namely: 1. Hand the Personal Interview outline to the students and go over in class, discussing any unfamiliar points. 2. Personal Interview may be put on overhead, discussed as instructor leads students through the steps involved in correct interview techniques.	APPENDIX P - for sample outlines on Personal Interviews
		Alternate and follow-up activities:	
		1. Have a speaker from the State Employment Service discuss their services with respect to finding a job for persons.	Outside speaker for use as expert in the procedures for making an interview.
		2. Invite someone who regularly hires personnel to come and conduct sample interviews and observe interviews conducted by the students.	
		3. The movie "Getting A Job" may be shown at this point. This movie is somewhat outdated, but it does show very well the steps in planning ahead, application forms, and job interviews.	Film: "Getting A Job", 16min. B/W (IPC)

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Area B cont.	Students will have the experience of filling out an application form.	Have the students come to class prepared to fill out an application form. 1. Bring a ball point pen. 2. List of references ready to be listed. Stress the importance of following directions, neatness, accuracy, completeness. Students should fill out the application form on their own, then go back over the form with them and help fill in the areas they have questions about. Time Allowed --- 1 period	See APPENDIX Q for a sample application form. This should become a part of the student's notebook
	Students will observe and experience some unrehearsed personal interview.	If it can be worked out, the girls could view the "Three Young Women" by themselves and the boys could observe the "Three Young Men". The following questions could be used for discussion: 1. Did the people being interviewed follow the criteria we have discussed in class? 2. Did the interviewees use slang, dress appropriately seem interested, behave in a business-like manner, answer questions well enough, or any of the other points covered in the outline. 3. Which of the three would you hire, and how would you improve the interviews you have just observed? Time Allowed --- 1 period	Films: "Three Young Women" #000122, and "Three Young Men" #000121 (IPC)

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Area B cont.	Students will know effective resources for locating and acquiring jobs.	Suggested Implementation: 1. Compare and contrast the effectiveness of the following resources for locating jobs. a. Newspaper b. State Employment Service c. Private employment agencies d. Canvassing potential employers e. Canvassing by letter and/or personal data sheets f. Union offices or professional associates g. Through friends, neighbors, or relatives h. School placement services 2. By studying the "Help Wanted" ads from newspapers, analyze the employment needs in Sioux Falls area. 3. Clip news articles on new businesses or industrial developments in the area which might offer some possible employment. 4. Discuss the placement services offered by the Southeast Area Vocational School and the high school. 5. Role play what job seekers should say when canvassing for a job. 6. List factors to be considered in selecting a suitable job for youth.	

Subject Social Studies

Grade Level 9th

Topic or Unit	Objective	Career Related Instructional Activities	Resources Materials
Section IX Area B cont.	The student will identify factors involved in holding and succeeding in a career.	To avoid "preaching", the content of this objective may be covered in a problem-solving sequence, with liberal use of group discussion methods to share experiences and examine case studies. 1. Problem: Why do people lose their jobs? 2. Problem: How can you get started properly on a new job? 3. Problem: What are some important factors in holding a job? 4. Problem: How do your personality traits and your attitudes affect all aspects of your life? 5. Problem: After obtaining a job, what are some factors you need to consider in judging whether or not you are achieving success? 6. Problem: What are the dangers in constantly shifting jobs? Since this section deals with applying experiences and planning, only time will tell whether or not it was successful. Whatever the means, evaluations should stress performance and changes in students' behavior, rather than mere verbalization.	

Subject Social Studies

Grade Level 9th

STUDENT OUTLINE - CAREER AWARENESS

Requirements of this unit:

1. Keep up-to-date three-ring notebook. Include in notebook all material handed out and assignments completed.

2. Complete assignments on time.

3. Factors which effect grading:
    1. attitude
    2. enthusiasm
    3. completion of assignments
    4. test grades

The following is a brief outline of the Vocational Unit - Career Awareness objectives:

1. Student Involvement: Purpose of the unit, specific requirements, methods.

2. Self appraisal and self understanding, profile of self, aware of terminology.

3. Relating school to Occupational Planning, relating skills, knowledge, and habits of self to future, developing plan for high school with counselors.

4. The individual's role in our economic system concepts related to production, distribution, and consumption, the student's role as a consumer.

5. In-depth study of possible careers, clusters, what does data, people, things have to do with occupational trends, what preference does each of you have for data, people, and things.

6. Exploring jobs primarily involving work with data. What is data? Importance of data in today's society, tomorrow's society, school subjects to take.

7. Exploring jobs primarily involving work with people - knowledge of requirements of careers involving working with people, requirements, skills needed, changes taking place, school subjects to take.

8. Exploring jobs primarily involving work with things, what is meant by "working with things, jobs of this nature, school subjects to take.

9. Researching of jobs and planning ahead.

APPENDIX B

WORDS FOR THE WORLD OF WORK

Section A.

Career
Occupation
Job
Cluster
Leisure
Standard of Living
Avocation

Section B.

Attitude
Ability
Apptitude
Interests
Personality
Physical Assets & Limitations
Achievements - Accompolishments
Habits
Personal Satisfaction
Psychological Needs
Goals
Financial Rewards
Hobbies
Reliability
Responsibility

Section C.

Professional
Semi Professional
Technical
Managers
Skilled
Semi Skilled
Unskilled
Self Employment
Civil Service
Laborers
Apprentice
Personal
Salary
Wage
Commission
Moonlighting
Working Mothers

Section D.

Interview
State Employment Service
Private Employment Service
Letter of Application
References - Letter of Reference

APPENDIX C

OCCUPATIONAL ECONOMICS: NAME____________________DATE____________

PRE (POST) TEST: Regarding occupations, careers, jobs, economics

Use Plus (+) for true, Zero (0) for false.

_____1. The people of the U.S. have a higher standard of living than citizens of any other nation.

_____2. The dedication and effort of individual workers in the U.S. is a reason for the high standard of living.

_____3. Efficiency of administrators and management is a reason for the high standard of living in the U.S.

_____4. The U.S. population at present is around 210 million.

_____5. By 1975 our population is expected to be more than 225,000,000.

_____6. The work force in the U.S. presently totals more than 80,000,000.

_____7. Approximately one-third of the total U.S. labor force consists of women.

_____8. The average female may expect to spend 25 years or more in gainful employment outside the home, during her lifetime.

_____9. More than ten percent of the available labor force in the U.S. is Negro.

____10. There is greater unemployment (percentage) among Negro workers than among whites.

____11. Nationwide, on-farm agricultural employment is expanding at a faster rate than most industries.

____12. Unemployment in the U.S. has been staying in excess of five percent in the last several months.

____13. Professional and technical occupations continue to have a shortage of qualified applicants in recent years.

____14. More than 2,500,000 young people enter the labor market each year.

____15. Skilled or journeyman workers, in most industries, must have graduated from a four-year college.

____16. Nationwide, approximately one-third of the young people of high school graduating age do not graduate even in these times.

____17. In South Dakota more than fifteen percent of the students who enter the 9th grade do not graduate from high school.

____18. All industries require applicants to write formal letters of application, or fill out detailed information sheets, before they can be considered for employment.

____19. Skilled and other manual workers make up the largest percentage of any of the occupational groups.

____20. The Service Workers group may include people in hospital, restaurant and hotel work, as well as firemen and the policemen.

Adapted from SUTOE, 1971.

APPENDIX D

PARENT INTERVIEW AND OCCUPATION VISIT WORKSHEET

Parent Interview

1. Occupation of Parent____________________
2. List at least three activities of parent's occupation__________

    ____

    ____

    ____
3. Location of parent's work____________________
4. Training or educational requirements________________

    ____
5. Amount of experience required for entry______________
6. Advancement opportunities____________________

    ____

    ____

Occupation Visit

1. Date of visit__________________________
2. List three things you observed people doing while working________

    ____

    ____
3. Describe the working conditions____________________

    ____

    ____
4. Give reasons why you would or would not want to work in this occupation____________________

    ____

    ____

APPENDIX E

If this list were given to the general public, how would they list these occupations in order of prestige and importance to society?

1. General Doctor
2. Elementary Teacher
3. Clothing Store Owner
4. Salesman
5. Carpenter
6. Secondary Teacher
7. Plumber
8. Surgeon
9. Professional Musician
10. Building Contractor
11. Short Order Cook
12. Army Captain
13. Research Scientist
14. Farmer - Rancher
15. Garbage Collector
16. YMCA Director
17. Waitress
18. Computer Programmer
19. Long Haul Truck Driver
20. Electrical Engineer
21. Lawyer
22. Minister
23. Artist
24. Architect
25. Electrician
26. Taxi Driver
27. X-Ray Technician
28. Congressman
29. Newspaper Reporter
30. Registered Nurse

APPENDIX F

GUEST SPEAKER EVALUATION WORKSHEET

1. Did the speaker use words and talk so you could understand?__________

____

2. Did he/she make the subject interesting?____________________________

3. List some things you learned from the speaker_______________________

____

____

____

____

4. What could the speaker do to make the presentation more effective?

____

____

____

____

____

____

5. If you have speakers in the future, what subject would you like to have them talk about?

____

____

____

____

____

APPENDIX G

FINDING YOUR INTERESTS

NAME______________________________SEX_____H.R._____AGE_____

I. What does the school record show? (Consider grades 7, 8, and 9)

A. Average grade in English____, Math____, Science____, and in Social Studies____.

B. Two favorite school subjects.

1. ____________________, 2. ____________________

II. School activities (sports, plays, club work, etc.) are important:

A. Favorite school activity____________________________

1. It is interesting because____________________________

____

2. Major offices held, if any, in this organization________

____

B. Another favorite school activity is____________________ because it____________________. Offices held in that organization have been____________________________

C. Other school activities that would be nice to be a part of are____

III. Three favorite hobbies outside of school are: 1. ____________ 2. ____________________ 3. ____________________

IV. The skill that I feel best qualified to perform is____________

V. The course of study or special training that appeals most to me is____

VI. I have been told by my______________that I was especially good at____________________and____________________

VII. Members of my family and/or friends have suggested a career as
____________________ to me, and I feel it would be __________

VIII. The work I would really like to do for a living is ___________
____________________. Why? ______________________________

IX. Members of my family who have done this kind of work are ______
____

X. My parents urge me to complete at least ________ years of school.

XI. Their schooling consisted of grade school, ___________________
and ____

XII. I have held part-time and/or summer jobs as 1. ______________
2. ______________________________ 3. ______________________
I liked job number _______ the best. Job number ______ paid the best. It seemed I was most useful and learned the most on job number _______.

XIII. Reading:

A. My favorite newspaper is __________________. The part I enjoy most is ______________________________________

B. The magazines I most often read for pleasure are: 1. _____
_____ 2. ______________________ and 3. ________________

C. The book I most recently read for pleasure was ____________
________________________. That was _________ months ago.

XIV. The TV (or radio) programs I prefer are: 1. _________________
2. ____________________________ and 3. ____________________

XV. CHECK THE APPROPRIATE COLUMN for the following: YES NO

1. Am I the type of person who can follow instructions to the letter?
2. Do I mind being told how to do a certain thing?
3. Do I like doing a task exactly the same way each time?
4. Am I exact in the things I do?
5. Do I always remain calm when--
    - A. Taking a test in school?
    - B. Having plans suddenly changed?
    - C. Losing an argument?
    - D. Losing something important?
    - E. Participating in a sporting event?
6. Do I state my ideas clearly, verbally, and in writing?
7. Am I accurate in my oral and written work?
8. Do I enjoy speaking?
9. Do I enjoy writing?
10. Do I most enjoy working by myself?
11. Do I most enjoy working with others?
12. Do I prefer working outdoors?
13. Do I enjoy meeting new people?
14. Do I enjoy working with my hands?
15. Would I rather do research than repair work?
16. When I take my first permanent job, the beginning salary will be more important than possible future raises.
17. Advancement, to me, means increasing pay more than status or social acceptability.

YES NO

18. Short hours and "good" vacations have more appeal to me than concern about security and retirement.

19. Am I more concerned about what I think of myself than of what others think of me?

20. Do I feel more challenged than threatened when confronted with decisions and responsibility.

21. Does having a job and family appeal to me?

22. Does it seem important that the wife should hold a job outside the home in order to help the family's standard of living?

Adapted from SUTOE, 1971.

APPENDIX H.

Do I like to do things which require me:	Very Little	Somewhat	Very Much
1. to use my hands in making things, either in operating a machine or in using a tool of some sort?			
2. to be patient and accurate?			
3. to work and cooperate with others?			
4. to take orders from others?			
5. to work with farm or other animals?			
6. to work outdoors?			
7. to judge the quality of merchandise?			
8. to be prompt and punctual?			
9. to stay indoors?			
10. to be in clean surroundings?			
11. to be in noisy places?			
12. to move around from place to place?			
13. to use my physical strength?			
14. to have ideas and imagination?			
15. to make plans and organize activities?			
16. to work by myself?			
17. to read and to study?			
18. to express myself in writing?			
19. to think rapidly?			
20. to use mathematics?			
21. to be constantly alert and ready for action?			
22. to make decisions by myself?			
23. to assume responsibility for others?			
24. to meet people?			
25. to present a point of view and talk convincingly on a subject?			
26. to sell things?			
27. to work with groups of children?			
28. to express ideas through art or artistic ability?			
29. to manage money?			
30. to care for someone ill?			
31. to do housework and plan meals?			
32. to be with people older than myself?			
33. to be casual and relaxed?			

Sometimes the way we react to others in a group is a valuable clue to be considered when we try to imagine ourselves in a work situation. Again, we need to analyze ourselves as honestly and as factually as possible. Look at each item by itself, try to remember how you behaved with reference to each item in a number of instances, then place an X in the appropriate column. Do this without trying to excuse or explain your action.

When I am with a group, do I:	Rarely	Sometimes	Usually
1. introduce myself to strangers?			
2. volunteer if help is needed?			
3. assume leadership?			
4. follow suggestions of others cheerfully and without complaining?			
5. participate in the discussion?			
6. allow the other fellow to express his point of view?			
7. try to follow the rules of the group?			
8. criticize unfairly the suggestions of others?			
9. talk when others are talking?			
10. insist on being the "center of attention"?			
11. behave in a manner suitable for my age?			
12. resent being asked to serve on a committee?			
13. try to force my plans or wishes on others?			
14. show respect for elders?			
15. show my willingness to try new ways of doing things?			
16. often get appointed as chairman of a committee?			
17. sit back and let someone else do the work?			
18. complain when the group decides to engage in an activity in which I am not interested?			
19. go along with the group rather than state my own feelings in order to be in with the gang?			
20. get asked to do an important job?			

From the list above, write down the statements you believe represent your strong points and those that represent your weak points when in a group. How might you overcome your weaknesses in getting along with others?

APPENDIX I

	EVALUATION FORM	ALWAYS	SOMETIMES	SELDOM	NEVER
1.	Do what I am asked to do				
2.	Co-operate with fellow students				
3.	Co-operate with my teachers				
4.	Can work on my own and show initiative				
5.	Hand my assignments in on time				
6.	Am courteous to my teachers				
7.	Am courteous to my fellow students				
8.	Do my assignments neatly				
9.	Work efficiently and use time well				
10.	Am a leader				
11.	Am a good follower				
12.	Am helpful to my teachers				
13.	Am helpful to my fellow students				
14.	Stick to a job until I'm done				
15.	Am reliable				
16.	Attend class regularly				
17.	Am cheerful				

APPENDIX I cont.

TALLY SHEET

	SELF	TEACHER	OUTSIDE PERSON	TOTAL
1. Dependability				
2. Co-operation				
3.				
4. Initiative				
5. Promptness				
6. Courtesy				
7.				
8. Neatness				
9. Efficiency				
10. Leadership				
11. Loyalty				
12. Helpfulness				
13.				
14. Perserveance				
15. Good Attendance				
16. Realibility				
17. Cheerfulness				

THE PAST CATCHES UP

Plan for the Future

The Problem: The ABC Chemical Company has 10 job openings. All of the job openings deal with the area of science. You are to use the available information and decide which 10 people will get the jobs.

NO. ____________

Please list the following information to the best of your ability.

1. How many days over the past three years have you been absent from school? ________________
2. How many yellow slips, late to class, did you get over the past three years? ____________________
3. How many white slips, late to school, did you get over the past three years? _____________________

APPENDIX K

INTERVIEW SHEET

What to say on the phone:

Hello, this is ________________. I'm in 9th grade at ____________ Junior High School. I've become interested in the occupation of ________ ________________. I was wondering if I could make an appointment with you next week at your convenience, so you could answer some of my questions about this occupation?

1. What are today's requirements for getting into this occupation?

2. What are the general working conditions?

3. What are the opportunities for getting into this occupation?

4. What are the opportunities for advancement in the occupation?

5. What advantages and disadvantages does this occupation offer?

6. Would you encourage me to enter this occupation? Why?

APPENDIX L

A survey of the courses offered at Lincoln Senior High School and Washington Senior High School would indicate that all clusters (listed below) are represented, with the exception of the marine science cluster.

CAREER CLUSTER OUTLINE

I. Cluster for Health Occupations

  A. Working with Health Information Systems
  B. Helping to Deliver Health Services
  C. Mental Health, Mental Illness and Retardation
  D. Accidents, Injuries and Emergency Services
  E. Dental Science and Services
  F. Pharmaceutical Science and Services
  G. Medical Science and Services
  H. Biological Science and Services
  I. Administration of Health Service Programs

II. Cluster for Marine Science

  A. Marine Biology
  B. Commercial Fishing
  C. Aqua-Culture (harvesting food from the oceans)
  D. Marine Exploration
  E. Underwater Construction and Salvage

III. Cluster for the Environment

  A. Soil and Mineral Conservation and Control
  B. Space and Atmospheric Monitoring and Control
  C. Environmental Health Services
  D. Development and Control of Man-made Environment
  E. Forest, Range, Shore and Wildlife Conservation
  F. Water Resource Development and Conservation

IV. Cluster for Consumer and Homemaking

  A. Child Care, Guidance and Counseling
  B. Family and Community Services
  C. Homemaking-related Maintenance Services
  D. House Design and Interior Decoration
  E. Applied Skills within the Home
  F. Food Service Industry

V. Cluster for Personal Service Occupations

- A. Barbering
- B. Cosmetology
- C. Physical Culture
- D. Mortuary Science
- E. Household Pet Services

VI. Cluster for Hospitality and Recreation Occupations

- A. Counseling for Leisure Time
- B. Therapy
- C. Recreation Advertising and Promotion
- D. Tour Guides
- E. Entertainment
- F. Recreation Education
- G. Park and Zoo Personnel
- H. Hotel and Restaurant Management

VII. Cluster for Construction

- A. Designing
- B. Constructing
- C. Land Development
- D. Fabrication and Installation
- E. Interior Furnishing
- F. Landscaping

VIII. Cluster for Manufacturing

- A. Designing Plants, Products and Equipment
- B. Study and Use of Materials
- C. Involvement in the Production Process
- D. Distributing the Product
- E. Researching and Developing Products and Methods

IX. Cluster for Transportation

- A. Types of Land Transportation
- B. Aerospace Transportation
- C. Pipeline Transportation
- D. Water Transportation

X. Cluster for Communication and Media

- A. Line Communication (using telephone or telegraph lines)
- B. Broadcasting
- C. Publishing
- D. Audio/Visual Communication (records and photos)
- E. Language Communication (through signs and illustrations)

XI. Cluster for Fine Arts and Humanities

- A. Fine Arts (creating, performing and designing)
- B. Humanities (writing and the uses of languages)

XII. Cluster for Public Services

- A. Finance-Related Services
- B. Service in Urban Planning and Development
- C. Working with Government Regulatory Agencies
- D. Education
- E. Police and Fire Protection
- F. National Defense
- G. Postal Service
- H. Public Utilities (water, sewer, power, etc.)
- I. Public Health
- J. Labor Affairs
- K. Highways (design, construction and control)
- L. Public Transportation
- M. Social Services and Rehabilitation
- N. Courts and Correctional Institutions
- O. Parks and Public Recreation

XIII. Cluster for Marketing and Distribution

- A. The Marketing System (overall management of distribution and planning)
- B. Sales and Developing Sales Aides
- C. Buying or Purchasing Inventory or Materials
- D. Sales Promotion
- E. Physical Distribution of Products
- F. Marketing Services (banks, insurance companies, etc.)

XIV. Cluster for Agri-business and Natural Resources

A. Support and Regulation (protecting natural resources)
B. Research (on development and use of resources)
C. Forestry
D. Land and Water Management
E. Fisheries and Wildlife
F. Mining and Quarrying
G. Petroleum and Related Products
H. Production (seeds and feeds)
I. Service (maintaining equipment, animal health)
J. Processing and Marketing

XV. Cluster for Business and Office Occupations

A. Accounting, Computing and Data Processing
B. Information, Processing and Business Communication
C. Material Support: Transporting, Storing and Recording
D. Supervision and Administration

APPENDIX M

WHICH CLUSTER?

1. Nurse
2. Cosmetology
3. Marine Exploration
4. Production Line
5. Entertainment
6. Musician
7. Soil Conservation
8. Carpenter
9. Restaurant
10. Truck Driver
11. Artist
12. Dental Service
13. Radio & TV Repairman
14. Child Care
15. Postal Service
16. Mechanic
17. Publisher
18. Wildlife Conservation
19. Warehouse Worker
20. Interior Decorating
21. Education
22. Real Estate
23. Underwater Conservation
24. Computer Programmer
25. Producing Materials
26. Secretary
27. Forestry
28. Soil Development
29. Landscape
30. Barber

OCCUPATION INFORMATION RESEARCH WORKSHEET

1. Name of occupation ____________________
2. Is this occupation found in Sioux Falls ____________________
3. Expected monthly wage or hourly wage ____________________
4. Amount of training or education required ____________________
5. Where could you receive training or education? ____________________

   ____
6. What is the expected need for this occupation within the next ten years in Sioux Falls? - South Dakota? - Nationally? -

   ____

   ____

   ____
7. List at least three activities or duties you would do in this occupation

   ____

   ____
8. List at least three things that describe the working conditions ____________________

   ____

   ____
9. Briefly write about your impressions of this occupation ____________________

   ____

   ____

   ____
10. List the reference materials you utilized in answering the foregoing questions: ____________________

    ____

    ____

APPENDIX O

OCCUPATIONAL AREA: ____________________

Some facts about the occupation of ________________________________

What is the title of the job in which I am most interested?

What the main things a worker in this occupation does?

In what kind of organization (business, industry, government) might such a job be found?

Who can help me obtain information about his occupation?

NAME OF INDIV.	NAME OF ORGAN.	ADDRESS	PHONE NO.

What government or privately owned organizations should be visited to make observations of workers on the job?

NAME OF ORGAN. OR BUSINESS	ADDRESS	WHOM TO CONTACT FOR APPOINTMENT

What tools, equipment, or materials are needed to perform the work? Make a list of each group of items:

TOOLS	EQUIPMENT	MATERIALS

What previous experience is required? ____________________

____

____

What is the minimum education or training required of a beginning worker in this occupation? ____________________

____

In what way does one enter this occupation? (Check each one)

No previous experience needed__________

Apprenticeship__________

Internship__________

Other__________ (Specify) ____________________

What is the approximate cost of any additional education or training which I might need? ____________________

____

If one is reasonably well trained, how long will it take to become proficient in this occupation? ____________________

____

____

____

What qualifications, other than educational, are necessary?

(a) Physical ______________________________

____

(b) Mental ______________________________

____

(c) Emotional ______________________________

____

Is the worker expected to live up to a code of ethics? __________

If so, what are these ethics? ______________________________

____

What are some of the related occupations or occupational fields?

____

____

____

In what sort of physical environment is the work performed?

____

____

Where is the work done? Indoors ____ Outdoors _____ Both ___

Is the work hazardous? Yes_____ No_____ Sometimes_______

Must I join a union? Yes_____ No_____ Probably_______

Will I work alone or with a group? Alone_______ Group______

What mode of dress or appearance is required for this job?

____

____

Is the work seasonal? Yes____ No_____

How long does the off-season last? ______________________________

What may a worker do during the off-season? ______________________________

____

Will I have to move away from my home community or this area in order to get a job in this occupation?

Yes _____ No _____ Uncertain _____

In what parts of the country are the most jobs in this occupation located? ______________________________

____

How many people are employed in this occupation?

(a) My community __________________

(b) United States __________________

Compare the number of people employed now with what it was 10 or 20 years ago?

More ________ Less ________ No significant change ______

If more or less persons are now employed, what are some of the reasons for this change? ______________________________

____

____

____

What provisions are provided in this occupation? (sick leave, vacation, savings, pension, unemployment insurance, etc.)

____

____

____

____

____

At what pay may one expect to begin? ______________________________

How many hours per week will one work? ____________________________

How often are raises given? ____

Does this occupation really appeal to me? ______________ Why?

____

____

____

How do my qualifications at the present time compare, generally, with the qualifications required for entrance to this occupation?

REQUIRED QUALIFICATIONS	MY QUALIFICATIONS

On the basis of all the information which I have about myself and this occupation, can I meet or will I later be able to meet the qualifications for this position?

Write a statement explaining why or why not: ______________________

____

____

____

____

____

____

For a Career as: ______________________________

Schools I should attend (high school, technical, college, etc.)	Subjects I should study to complete the requirements for entering this occupation.

APPENDIX P

I. Finding and Applying for A Job

   A. The job seeker is a salesman
      1. Product is your services
      2. Customers are employers with positions to fill
   B. Three major steps to getting a job
      1. Know your product
      2. Find customers who need your product
      3. Present the product in such a way that someone will want to buy it

II. What Have You To Offer? (Personal Data Sheet)

   A. Personal information
   B. Education
   C. Experience
   D. General information
   E. References

III. Finding Job Openings - places where employers go in search of employees

   A. School placement service
      1. Jobs are investigated (no charge)
      2. Every effort is made to place you in a job that suits your abilities
   B. State Employment Agency
      1. 1,700 local state employment offices
      2. Neither employers nor persons in search for a job are charged for the services
      3. They attempt to match applicant to jobs for which they are best fitted
   C. Private employment agency
      1. Charge to help people find jobs
      2. Most are reliable, check with Better Business Bureau
      3. Check about the fee before accepting any job offers
   D. Personnel offices in large businesses or industries
   E. Newspaper ads
   F. Friends and acquaintances

IV. Selling Your Services - personal interview

   A. Before the interview
      1. Find out the name of the person who will do the interview
      2. Obtain permission to use the names of those you plan to submit as references
      3. Anticipate some of the questions you are likely to be asked and be prepared to answer them

4. Check your appearance
    a. what to wear
    b. shoes, nails, hair, no flashy or noisy jewelry
    c. should remember this is not a cocktail party, but potential employment

B. During the interview
  1. BE ON TIME
  2. GO ALONE
  3. Behave in a business-like manner and use no slang
  4. At the start of the interview, introduce yourself and state the position or area of work for which you are applying
  5. Remain standing until you have been asked to sit down
  6. Let the interviewer do the talking, except when asked a question. Give answers completely, yet briefly as possible. If asked about your qualifications, you may give him a copy of your Personal Data Sheet
  7. Try to appear well poised, never place your belongings on the interviewers desk
  8. If you have had previous employment, never critisize your former employer
  9. Wait until you have been offered the position before asking about salary and hours of work
  10. The interviewer will usually indicate when the interview is over. Thank him for giving you an opportunity to talk with him and leave thanking also the secretary or receptionist who greeted you

C. After the interview
  1. On the following day, it is a good policy to write a short note thanking the interviewer for his time and remind him of your interest in the job

BEST COPY AVAILABLE

Name: Date:

(SAMPLE)

APPLICATION FOR EMPLOYMENT

PERSONAL INFORMATION:

Date Soc. Sec. Number

Name (Last) (First) (Middle) Age Sex

Present Address (Street) (City & Zone) (State)

Permanent Address (Street) (City & Zone) (State)

Phone No. Own Home Rent Board

Date of Birth Height Weight Color of Hair Color of Eyes

Married Single Widowed Divorced Separated

Number of Children Dependents Other Than Wife or Children Citizen of U.S.A. Yes( ) No ( )

EMPLOYMENT DESIRED:

Position Date You Can Start Earnings Desired

Are you employed now? If so, may we inquire of your present employer?

EDUCATION:	Name and Location of School	Years Attended	Date Graduated	Subjects Studied
High School	....			....
College	....			....

MILITARY STATUS:

Date Inducted	Date of discharge	Type of Discharge Honorable ___ Dishonorable ___ Other-Explain ___	Branch of Service
Rank when entered Service	Rank when left Service	Reserve status	Selective service status

FORMER EMPLOYERS (Begin with last position):

Month & Year	Employer's Name & Address	Earnings	Position	Reason for Leaving

PERSONAL REFERENCES: (Omit Relatives and Previous Employers)

Name	Address	Occupation

HEALTH RECORD:

List any physical defects ______________________

Have you defective: Hearing? __________ Vision? __________ Speech? __________

MISCELLANEOUS:

Do you agree to notify us and request advanced approval from us immediately upon considering the possibilities of working for any other organization?

Do you carry any form of insurance? ______ What kind? ______________

Do you drive a car? __________ Have you a drivers license? __________

What were your favorite school subjects? ______________

List your hobbies: ______________

To what organizations do you belong? ______________

Why would you like to become associated with this company? ______________

In case of emergency, notify: ______________
(Name) (Address) (Phone)

AUTHORIZATION: (Read carefully before signing)

1. This application for Employment is signed with the understanding that my previous employers will be asked for information relative to my employment record with them.
2. If I am employed, I agree to abide by and observe all rules and regulations of the Company.
3. If I am employed, I agree that my employment may be terminated by notice, effective at the end of any calendar week.

Date ______________ Signed ______________
(Applicant)

..................DO NOT WRITE ANYTHING BELOW THIS LINE..................

SAMPLE

APPENDIX R

TRAINING INSTITUTIONS

IN

SIOUX FALLS

Augustana College

Dale Carnegie Course

McKennan Hospital

- Radiology Technology
- Nursing
- Inhalation Therapy
- Medical Technology

Nettleton Commercial College

- Charm and Modeling
- Speedwriting
- Secretarial
- Fashion Merchandising
- Accounting
- Business Administration
- Real Estate
- Medical Assistant

North American Baptist Seminary

O'Gorman High School

Sioux Falls College

Sioux Falls Public Schools

Sioux Valley Hospital - Nurses School

South Dakota Barber College

South Dakota Hairstyling Academy

Southeast Area Voc-Tech School

Stenotype Institute of South Dakota

- Secretarial
- Court Reporter Training

Stewart Hairstylists

FIELD TRIP INFORMATION WORKSHEET

1. Destination and location of field trip____________________

2. List at least five things you are to look for and learn through this field trip:

3. List the various occupations you observed during the field trip:

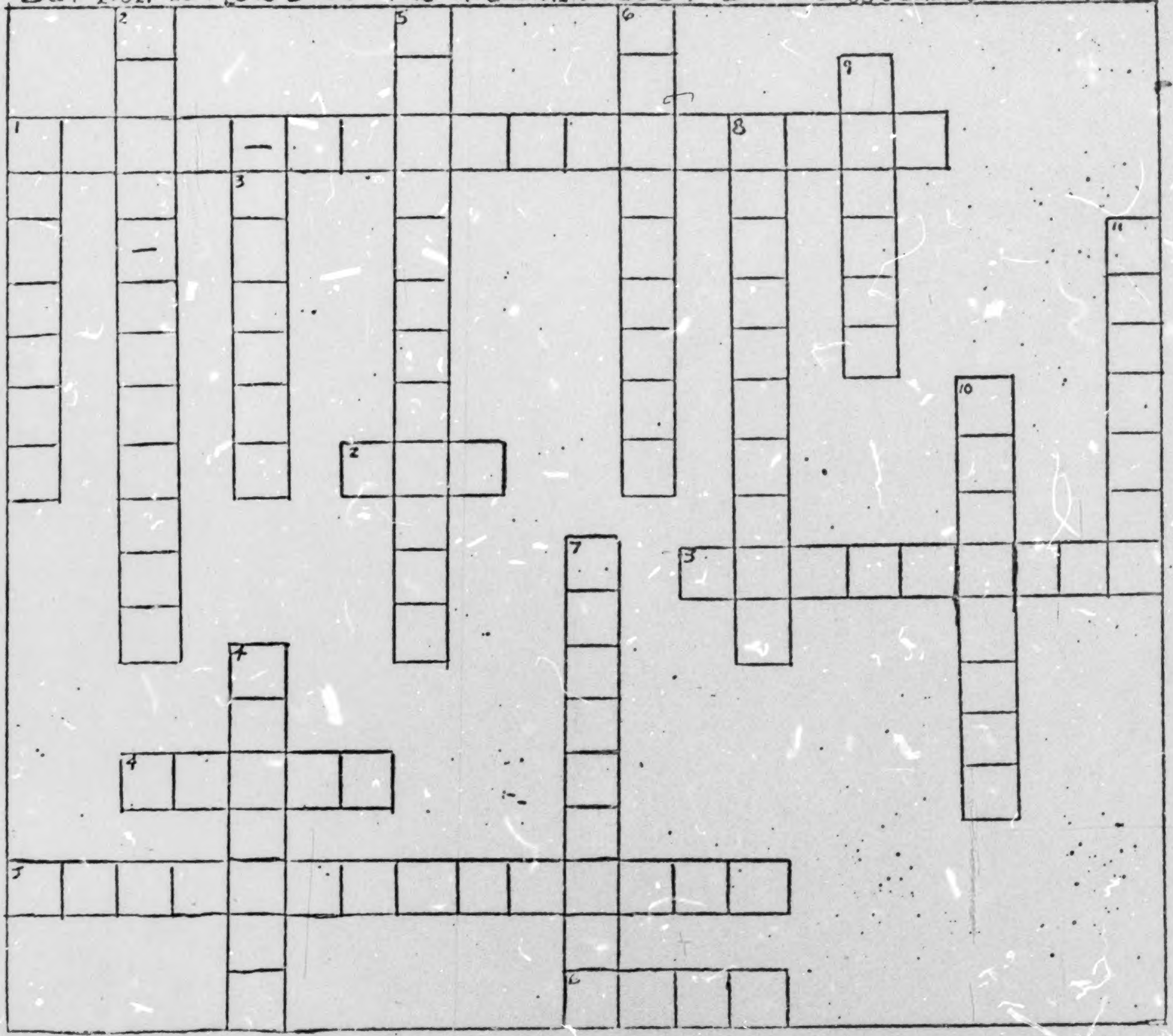
4. List anything you learned about any of the occupations listed above as a result of the field trip:

5. Do you think the field trip helped you learn more about occupations? (Explain your answer)____________________

6. Would you like to go on a similar field trip? (If so, give suggestions)

appendix 7

DEFINITIOTIONS OF THE TERMINOLOGY IN THE WORKING WORLD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DEFINITIONS OF THE TERMINOLOGY USED IN THE WORKING WORLD

appendix

Across

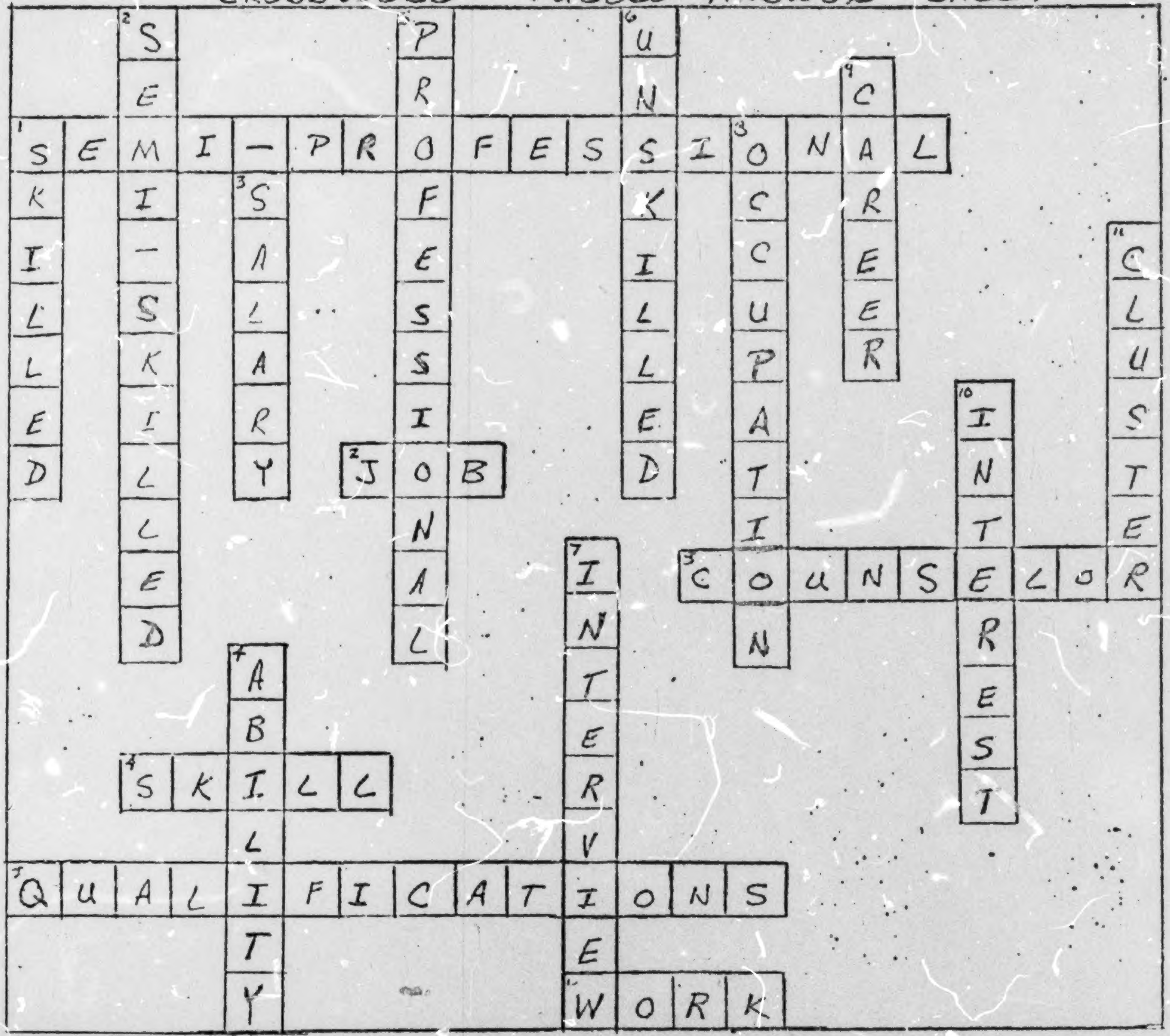
1. Educational level likely to be high school, technical school or equivalent; usually small business operators or technical workers.
2. An action requiring some exertion.
3. A person who assists another person in making decisions.
4. An art, trace, or technique, particularly one requiring the use of the hands or body.
5. Any quality, accomplishment or ability that suits a person to a specific task.
6. Physical activity or mental effort directed toward the production of something.

Down

1. Occupations requiring apprenticeship or special training.
2. Work requiring some training but much less then skilled.
3. A fixed compensation for services paid to a person on a regular basis.
4. The quality of being able to do something.
5. Occupational level requiring the highest level of education.
6. Level of occupation requiring no special training.
7. A face to face meeting for the purpose of a formal discussion concerning the possibility of further employment.
8. An activity that serves as one's source of income.
9. A chosen pursuit or life work.
10. What one likes to do.
11. Groups of related jobs.

appendix: T

CROSSWORD PUZZLE ANSWER SHEET


1 SEMI-PROFESSIONAL
1 SKILLED
2 SEMI-SKILLED
2 JOB
3 SALARY
3 OCCUPATION
3 COUNSELOR
4 CAREER
4 SKILL
5 PROFESSIONAL
6 UNSKILLED
7 INTERVIEW
7 ABILITY
7 QUALIFICATIONS
10 INTEREST
11 CLUSTER
WORK

CAREERS BIBLIOGRAPHY

CALL NO.	TITLE	AUTHOR
331.7 AUL	Careers in the age of automation	Aulick
331.7 KIM	Succeeding in the world of work	Kimbrell
331.70 ADA	Job facts: 1966/67	Adams
341.702 N	Your career in Foreign Service	Neal
350.023 L	Your career in civil service	Liston
351 D	Your career in Federal civil service	DuPre
352 C67p	Police; the work, equipment and training of our finest	Colby
352 F65b	Behind the silver shield	Floherty
353.3 C67p	Park ranger; the work, thrills, equipment of the National Park Rangers	Colby
355 D265a	The Army	Daugherty
358 L235a	The Air Force	Landis
355.2 H	The student's guide to military service	Harwood
355.2 M	You and the draft	MacCloskey
359.9 H185m	The Marine Corps	Hammond
359.9 MON	The U.S. Marines	Montross
359.9 P285c	The Coast Guard	Paxton
358.24 COL	The Signal Corps today	Colby
359 R54n	The Navy	Robertson
361.023 K	Careers in social work	Koestler
363.202 L	Your career in law enforcement	Liston
364.1 M	Crime scientists	McGrady

CAREERS BIBLIOGRAPHY (continued)

CALL NO.	TITLE	AUTHOR
371.42 Sci3h 1968	Handbook of job facts	S.R.A.
371.42 SEX	The Sextant Series for exploring your future	Am. Lib. Press
383 DEN	America's silent investigators; the story of the postal inspectors	Denniston
387.5 M	Your future in the Merchant Marine	McLintock
387.7 M96s	Skygirl; a career handbook for the airline stewardess	Murray
387.7023 R	Flying high; what it's like to be an airline stewardess.	Rich
371.42 BAE	Occupational information	Baer
371.42 CAR	Career exploratory kit (Pamphlets alphabetized A-Z and cross reference)	Careers
371.42 CAR	Industrial Careers Kit (A-Z alphabetized)	Careers
371.42 CAR	Semi-skilled Careers Kit (Pamphlets)	Careers
371.42 CAR	Health Careers Kit (Pamphlets)	Careers
371.42 CAR	Business Careers Kit (Pamphlets)	Careers
371.42 D56	Dictionary of occupational titles	U.S. Printing
371.42 ENG	Encyclopedia of career and vocational guidance	Doubleday
371.42 F49c	Occupational guidance; charting your course 5 units vols. 1-8	Finney
371.42 F77c	Occupational literature	Forrester
371.42 L	Lovejoy's career and vocational school guide; a source book and directory of job training opportunities	Lovejoy
371.42 S	Your career if you're not going to college	Splaver

CAREERS BIBLIOGRAPHY (continued)

CALL NO.	TITLE	AUTHOR
371.42 Un30	Occupational outlook handbook; employment information on major occupations for use in guidance	U.S. Bureau of Labor Stat.
378.73 Am3	American universities and colleges	Am. Council on Education
378.73 Am35	American junior colleges	Am. Council on Education
378.73 C46c	Chronicle college charts	Chronicle Guid.
378.73 L	Lovejoy's college guide	Lovejoy
540.23 P	Careers & opportunities in chemistry; a survey of all fields	Pollack
610.73 D	The story of nursing	Dodge
610.73 M	Your future in nursing	McDonnell
621.381 K	Aim for a job as an electronic technician	Keefe
629.132 L	I, the airplane pilot	Lodeesen
629.28 TAY	Aim for a job in automotive service	Taylor
634.9 DOB	About foresters	Dobrin
636.089 M	The world of the veterinarian	McCoy
658.31 L	On the job training and where to get it	Liston
658.85 G	Your future in direct selling	Goodrich
770.69 H76f	Find a career in photography	Hood
770.69 PIN	Careers with a camera	Pinney
780.69 WAR	Careers in music	Ward

CAREER PAMPHLET FILE

Pamphlets alphabetized A-Z and put into brown folders for easy use. Authors include Science Research Associates, Chronicle Guidance Publications, and the Institute for Reasearch.

ENCYCLOPEDIA

Many occupations are included in the various encyclopedias that are kept in the library.

Films:

"Getting A Job", Encyclopedia Britannica Films

"Three Young Men", Chicago University

"Three Young Women", Chicago Univeristy

Filmstrips:

"Choosing Your Career", Guidance Associates

"Developing Values", Guidance Associates

"Four Who Quit",Guidance Associates

"Jobs and Gender", Guidance Associates

"On the Job: Four Trainees", Guidance Associates

"People Who Create Art", Guidance Associates

"People Who Help Others",Guidance Associates

"People Who Influence Others", Guidance Associates

"People Who Make Things", Guidance Associates

"People Who Organize Facts", Guidance Associates

"People Who Work in Science", Guidance Associates

"Preparing for the World of Work", Guidance Associates

Video-Tapes: - Available at LSHS - TV studio

"INTRODUCTION TAPE"	#710001	16 min
"APPRENTICESHIP TRAINING"	#710002	27 min
"RETAIL ADVERTISING"	#710003	27 min
"RETAIL SALES OCCUPATIONS"	#710004	27 min
"GRAPHIC ARTS"	#710005	28 min
"DIESEL"	#710006	28 min
"AUTOMECHANICS"	#710007	27 min
"MASON-BRICKLAYER"	#710008	29 min

Video-Tapes cont.

"MOTOR FREIGHT INDUSTRY"	#710009	28 min
"BUS DRIVER"	#710010	15 min
"HAIRSTYLING"	#710011	27 min
"AIRLINE CAREERS"	#710012	27 min
"AVIATION MECHANIC"	#710013	15 min
"CULINARY OCCUPATIONS"	#710014	27 min
"MEAT CUTTER"	#710015	15 min
"LICENSED PRACTICAL NURSE"	#710016	17 min
"DRAFTSMAN"	#710017	28 min
"PHYSICAL THERAPIST"	#710018	27 min
"PLUMBERS"	#710019	14 min
"SERVICE STATION ATTENDANT"	#710020	15 min
"ELECTRICAL INDUSTRY"	#710021	12 min
"ELECTRICAL SAFETY"	#710022	26 min
"ELECTRICAL CONTRACTOR"	#710023	15 min
"TELEVISION REPAIRMAN"	#710024	15 min
"CAREERS IN TELEVISION"	#710025	15 min
"CAREERS IN RADIO"	#710026	14 min
"APPLIANCE REPAIRMAN"	#710027	14 min
"LOCAL LAW ENFORCEMENT"	#710028	14 min
"STATE HIGHWAY PATROL"	#710029	15 min
"WELDERS"	#710030	15 min
"REAS ESTATE SALESMAN"	#710031	15 min
"TAXIDERMIST"	#710032	15 min
"CARPENTRY"	#710033	15 min
"GAS COMPANY"	#710034	13 min
"BARBERING"	#710035	14 min
"DATA PROCESSING"	#710036	15 min
"COMMERICAL ART"	#710037	13 min
"STATIONARY ENGINEER"	#710038	16 min
"PHOTOGRAPHER"	#710039	15 min
"MEN'S MILITARY CAREERS"	#710040	10 min
"WOMEN'S MILITARY CAREERS"	#710041	10 min
"STENOGRAPHER"	#710042	14 min
"HOTEL-MOTEL MANAGEMENT	#710043	14 min
"FUNERAL DIRECTOR"	#710044	18 min
"JEWELRY REPAIR"	#710045	13 min

DIRECTORY OF PUBLISHERS AND DISTRIBUTORS

American Federation of Musicians, AFL-CIO, 641 Lexington Ave., New York, N.Y. 10022

American Guild of Musical Artists, 1841 Broadway, New York, N.Y. 10023

American Guild of Organists, 630 Fifth Ave., New York, N.Y. 10020

American Stock Exchange, 86 Trinity Place, New York, N.Y. 10006

Association-Sterling Films, 6424 W. Lake St., Minneapolis, Minn. 55426

Audio Visual TV Studies, Lincoln High School, Sioux Falls, S.D. 57105

Bowmar, P.O. Box 5525, 622 Rodier Dr., Glendale, Calif. 91201

California Polytechnic State University, Information Services Office, San Luis Obispo, Calif. 93401.

Careers, P.O. Box 135, Largo, Florida 33540

Center for Cassette Studies, Inc., 8110 Webb Ave., North Hollywood, Cal. 91605

Central Opera Service, Metropolitan Opera, Lincoln Center Plaza, New York, N.Y. 10023

Changing Times Education Service, 1729 H. St., N.W., Washington, D.C. 20006

Charles E. Merrill Publishing Co., Columbus, Ohio

Chronicle Guidance Publications, Inc., Moravia, N.Y. 13118

Chrysler Corporation, Community Affairs, P.O. Box 1919, Detroit 31, Mich. 48202

College of Education, Dept. of Home Economics Education, Athens, Georgia

Columbia University Teachers College, Bureau of Publications, New York, N.Y.

Coronet Films, Coronet Bldg. Chicago, Ill. 60601

Cottrell Safety Service, 2306 Walden Ave., Buffalo, N.Y. 14225

Curriculum Innovations Inc., 501 Lake Forest Ave., Highwood, Ill. 60040

D.C. Health and Co., Boston, Mass.

Doubleday and Co., 575 Madison Ave., New York, N.Y. 10022

Encyclopedia Britannica Films, Inc., 1150 Wilmette Ave., Wilmette, Ill. 60091

E.P. Dutton and Co., Inc., New York, N.Y.

Ford Film Library, The American Road, Dearborn, Mich. 48121

General Electric Corp., Public Relations, Film Library, Waterford, N.Y. 12188

General Motors Corp., Public Relations, Room 1-101, General Motors Bldg.
Detroit, Mich. 48202

Georgia-Pacific, 900 S.W. Fifth Ave., Portland, Ore. 97204

Greenberg-May Productions, Inc., 148 Virginia St., Buffalo, N.Y. 14201

Guidance Associates, Pleasantville, N.Y. 10570

Harcourt, Brace and World, 757 Third Ave., New York, N.Y. 10017

Hearst Metrotone News Inc., 450 W. 56th St., New York, N.Y. 10019

Houghton Mifflin, 1900 S. Batabia Ave., Geneva, Ill. 60134

Institute for Research, Career Pamphlets, 537 S. Dearborn St., Chicago, Ill.

Institute of Life Insurance, Educational Division, 277 Park Ave.,
New York, N.Y. 10017

Instructional Materials Laboratory, Southeast Area Vocational Technical
School, 1401 E. 35th St., Sioux Falls, S.D. 57105

Instructional Planning Center, Sioux Falls Public Schools, 201 E. 38th St.,
Sioux Falls, South Dakota

Insurance Information Institute, 110 William St., New York, N.Y. 10038.

J.B. Lippincott Co., Philadelphia, Penn.

J.C. Penny Co., Inc., Education and Consumer Relations, 1301 Ave. of the
Americas, New York, N.Y. 10019

Joint Council on Economic Education, 1212 Ave. of the Americas, New York,
N.Y. 10036

J. Weston Walch, Publisher, Portland, Maine, 04104

King Features, Special Services, 235 E. 45th St., New York, N.Y. 10017

Leasco Information Products, Inc., Educational Resources Information
Center (ERIC(, Bethesda, Md. 20014

Leswing.Communications, Stone Educational Publications, Chicago, Ill.

MacMillan Professional Magazines Inc., Industrial Education, 22 W. Putnam Ave.,
Greenwich, Conn. 06830

McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. 10036

McGraw-Hill Films, McGraw-Hill Book Co., P.O. Box 590, Hightown, N.J. 08520

McKnight Publishing Co., IACP, Dept. 14, Box 854, Bloomington, Ill. 61701

Michigan Technological University, Office of Admissions, Houghton, Mich. 49931

Modern Talking Pictures Service, 2323 New Hyde Park Road, New Hyde Park,
N.Y. 11040 or 9129 Lyndale Ave. S., Minneapolis, Minn. 55420

Music Educators National Assn., 1201 Sixteenth St., N.W., Washington, D.C. 20036

Music Therapy Center, 840 Eighth Ave., New York, N.Y. 10019

National Assoc. for Music Therapy, P.O. Box 610, Lawrence, Kan. 66044

National Assoc. of Schools of Music, David A. Ledet, Ex. Sec. One Dupont
Circle, N.W. Suite 650, Washington, D.C. 20036

National Restaurant Assoc., 1530 N. Lake Shore Dr., Chicago, Ill. 60610

National Science Teachers Assoc., 1201 Sixteenth St. N.W., Washington, D.C. 20035

New York Life Insurance Co., Career Information Service, Box 51, Madison
Square Station, New York, N.Y. 10010

North Dakota State Board for Vocational Education, 900 E. Boulevard Ave.,
State Office Bldg., Bismark, N.D. 58501

Northern States Power Co., Environmental Affairs Dept., Sioux Falls, S.D. 57101

Northwestern Bell Telephone Co., Sioux Falls, S.D. 57101

Oklahoma State Dept. for Vocational and Technical Education, Curriculum and
Instructional Materials Center, 1515 W. 6th Ave., Stillwater, Oka. 74074

Oregon Board of Education, Instructional Services Division, Career Education,
942 Lancaster Dr. N.E., Salem, Ore. 97310

Peripole, Inc., Browns Mills, N.J. 08015

Pinecrest State School, Director of Music Therapy, Pineville, La. 71360

Popular Science Audio Visuals, 355 Lexington Ave., New York, N.Y. 10017

Prakken Publications, Inc., School Shop, Box 623, 416 Longshore Dr.
Ann Arbor, Mich. 48107

Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632

Public School of Anne Arundel County, Director of Career Education,
Annapolic, MD. 21401

RCA Institutes Inc., 350 W. Fourth St., New York, N.Y. 10014

Robinsdale School District 281, Career Development, Cliff E. Helling, Voc. Dir.
Minneapolis, Minn.

Science Research Associates, Inc., 259 E. Erie St., Chicago, Ill. 60611

Scientific Manpower Commission, 2101 Constitution Ave., N.W., Washington,
D.C. 20418

Scott, Foresman and Co., 433 E. Eric St., Chicago, Ill 60611

Sears, Roebuck, and Co., Consumer Information Services, Dept. 703--Public
Relations, 303 E. Ohio St., Chicago, Ill 60611

Shell Film Co., 450 N. Meridian St., Indianapolis, Ind. 46204

Silver Burdett Co., Division of General Learning Corp., Morristown, N.J.

SL Film Productions, 5126 Hartwick St., Los Angeles, Calif. 90041

Society for Visual Education, Inc., SVE Educational Filmstrips, Chicago, 14, Ill.

South Dakota Arts Council, 235 S. Phillips Ave., Sioux Falls, S.D. 57101

South Dakota State Dept. of Health, State Capitol Bldg. Pierre, S.D.

South Dakota State University, Film Library, University Station,
Brookings, S.D. 57006

South-Western Publishing Co., 355 Conde St., West Chicago, Ill. 60185

State University Teachers College, Aneonta, N.Y.

Texas Technological University, College of Home Economics, P.O. Box 4170,
Lubbock, Texas. 79409

University of Minnesota, Dept. of Audio Visual Extension, 2037 University
Ave., S.E. Minneapolis, Minn. 55455.

U.S. Atomic Energy Commission, Public Information, Audio Visual Branch,
Washington, D.C. 20545

U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C. 20402

U.S. Government Printing Office, Supt. of Documents, Washington, D.C. 20402

U.S. Treasury Dept., Internal Revenue Service, Washington, D.C. 20402

Vital Information for Education and Work (VIEW), VIEW Development Center,
USD/Springfield, Springfield, S.D. 57062

Western Iowa Tech., 3075 Floyd Blvd., Sioux City, Iowa

Western Publishing Co., Inc., New York, N.Y.